THE BUILDER

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A VITAL YEAR

EMERGING from a year full of event and no little performance, the building industry faces a period in which are likely to be shaped for years to come the destinies not of itself only but of our country. For building has long demonstrably entered into the national life at many points—industry (and not only for export), education, the social services and housing—and it is the more regrettable that we are only now discarding the wartime habit of thought that production and not cost is what matters.

It is therefore a hopeful sign that the building industry, at the suggestion of the Minister of Works, is to set up a committee under the chairmanship of Mr. Howard Robertson, President R.I.B.A., to review methods of contract placing and management, from which suggestions for reducing building costs may come. No one should be under the illusion that this will prove easy; in common with other ancient craft industries, building has a large number of trade customs and methods which, in the absence of competition from outside our shores, have persisted in a day and age which needs them not. These restrictive practices will be shed in one of two ways only—by a cold economic wind or by a conscientious effort on the industry's own part to remedy affairs. Since there are already signs that the cost of construction is beginning to curb demand for buildings of all kinds—in other words, that the industry is pricing itself out of work—it is in the industry's own interest no less than the nation's that the building professions and trades should themselves seek means of carrying out construction at a more economic level. News of the composition of Mr. Robertson's committee and of the early publication of its report will be keenly awaited.

This committee will start its far from easy task with some advantages. For one thing nearly all sides of the industry are now awake to the need for increased production and lower costs; this need, in fact, is the keynote of the majority of the New Year messages from the industry's leaders printed in this issue. For another, there has been a noticeable check in the rise of building costs; as the Chart given on page 43 shows, the index at January 1 stood at 320, which compares with 327 twelve months ago, a drop of seven points. Yet remembering that the datum in 1939 was 100, it is seen we have still far to go.

The work of the committee lies, as we see it, not so much in adumbrating fresh principles as in selecting, from the wealth of thought and experience that has gone into compiling the reports of the Working Party and the Simon Committee on the placing and management of building contracts, such recommendations as are applicable to our present situation. It should not be difficult to prepare a theoretical *modus operandi* which will work, on paper. Results may be harder to achieve, however, and will call for a climate of buoyancy and enterprise such as the Productivity Team found to exist in the U.S.A. The last twelve months have seen a marked improvement in Great Britain towards establishing such a climate. Improvement in materials supply; price reduction of an increasing number of essential materials; and a welcome easing of planning controls and the licensing system; these things have put fresh heart into the industry. We may not yet have left behind the winter of our discontent, but spring is clearly on the way.

The question which the industry must ask itself and to which it must find an answer is: Whether it is in proper shape to take the fullest advantage of improving conditions. The tendency still persists for some sections of the building trade to attribute responsibility for inefficiency and low production in quarters other than their own, and for all sides to unite in laying the blame for high costs on licensing procedure, on low production by the operatives and on materials shortage. It is true that these factors have had much to do with the present critical situation, but they do not represent the whole story, and each section of the industry must now stand back and look at itself with an appraising eye. There is no branch of the industry or of its ancillary trades and processes which could not find ways of functioning more efficiently and producing more cheaply.

We would suggest that, without waiting for any further lead, each profession and branch of the building trade should at once commence on a self-survey with the aim of seeing what personal contribution it can make to the common end of bringing down the cost of building and increasing output. Methods of work and management, restrictive practices and price arrangements, and on the operatives' side the degree and tempo of effort; these things require the most searching analysis directed towards improvement or elimination.

No dramatic results may be expected. There is no single action which will bring down costs with a run; reduction will come about by a number of individual contributions from the professions and trades which together form the building team in which each member, from the building owner and the architect to the foreman and the building labourer, has a vital and particular part to play.

We shall do well to remember that costs at their present level will kill speculative building and bring bankruptcy and heavy unemployment in their train. Lower costs, on the other hand, will release a flood of necessary constructional work and so enable the building industry, while serving the nation in its fight for recovery, to engage itself fully for years to come. The choice is simple; we must make it in the weeks ahead.

REVIEW OF TENDERING

THAT the review of tendering and contract procedure which the Minister of Works has invited the R.I.B.A. to conduct may be speedily and objectively carried out is undoubtedly a matter of high importance. It is likely that from such a review may come proposals for improvements of the building machine on a wider scale, and both industry and

public as such stand to gain. It must be remembered that neither the R.I.B.A. nor the building industry is equipped to undertake the work of a Royal Commission and the Minister has, for that reason, been wise to confine his request to consideration of the narrower issue of contract placing and management.

The London Builders' Conference took a public-spirited step when, in their chairman's letter of December 5 to the Ministry of Works, they offered to hold in abeyance their request for an impartial investigation of their activities, and the change of attitude as outlined in the later correspondence (printed in our last issue) is therefore regrettable in that it can only impede the review from which their members so largely stand to benefit.

That a great industry should manage its own affairs is vital in these days when the tendency of some governments is to impose direction from outside. It would be a grave matter if any sectional interest, for any personal reason, should impede such a move towards industrial self-government, and we sincerely hope that the Conference will return to the more liberal attitude shown at the earlier stages of the correspondence and co-operate in what is not a judicial inquiry but a review of wider matters.

MR. MACMILLAN'S TASKS

PROBLEMS connected with building exist to be solved in 1953 by others than builders. Perhaps more than his fair share concern Mr. Harold Macmillan, Minister of Housing and Local Government, who already is committed to amendment of the Town and Country Planning Act, 1947, an Act which he has already suspended in part in the shape of the clauses relating to Development Charge. The Minister must also make further progress along the road to the annual target of 300,000 houses, and here the bringing into the picture on a larger scale of the speculative house-builder will give him help. He may also get assistance from the prefabricated housing industry, if prices can be brought into phase with the traditional house.

What the nation is looking for, however, is the emergence of a housing policy. It is understandable that, at the beginning of a new administration, there should be some piecemeal legislation : it is now high time that there should be revision in the very near future of the Housing Acts and the Rent Restriction Acts to enable a comprehensive policy to be established for new housing, repair of existing property and slum clearance.

So far as the Rent Restriction Acts are concerned, the folly of allowing a large number of dwellings to fall into disrepair is generally accepted. Revision directed towards encouraging landlords to keep their property in good preservation is long overdue. This is a tenet of Conservatism which too long has been honoured in the breach. Likewise, the Government needs to give an answer to a question which increasingly is being asked by people of every political creed : How much longer are tenants of council houses to have their rents partially paid for, irrespective of their financial means, by the population at large, many of whom are in a worse financial position ? That a satisfactory answer should be found for this is a matter not of politics but of plain justice. We have gone far enough along the road towards regarding housing as another social service to accept that those in genuine need should be helped, but those who help to make up the differential in rent must be assured that the need is genuine. To carry through legislation designed to achieve this end, involving as it would some form of means test, will require political courage which we hope may be forthcoming.

Finally, slum clearance ; here, again, this pressing need requires to be worked into the comprehensive building pattern. It is true that Mr. Macmillan has drawn the attention of local authorities to the subject of ridding our great cities of outworn housing, but a real lead has yet to be given. We shall hope that before the end of the year the Minister will be able to show, at least in outline form, the plan in his mind for a comprehensive housing policy.

PROSPECT FOR 1953

New Year Messages to "The Builder"

FROM THE RT. HON. HAROLD MACMILLAN, P.C., M.P., MINISTER OF HOUSING AND LOCAL GOVERNMENT

NINETEEN-FIFTY-THREE is going to be a challenging and exciting year for the whole building trade. For the first time since the war, the industry is really free to build houses, and I hope to see private enterprise building taking its rightful place side by side with the local authority programme.

MR. MACMILLAN, Minister of Housing and Local Government. "This is the house-builder's year of opportunity."

We have gone a long way in 1952, and the real measure of our success is to be found in the greater happiness and comfort of thousands of our people. At the moment there are many more houses under construction than were built in the whole of 1952. But much has still to be done, and it is to the building industry above all that we look for success. I am very happy, through the medium of your paper, to send to all those engaged in the work of house building my best wishes for a happy and successful New Year.

FROM THE RT. HON. DAVID ECCLES, M.P., MINISTER OF WORKS

DURING 1952 there was a marked improvement in the output of the building industry on new work. This was partly due to a transfer from maintenance and partly to increased productivity. The good results could only be obtained because the supply of building materials increased. I am hopeful that during 1953 the expansion of production in both building and building materials will continue. The larger programme of houses and industrial building provides a great opportunity and a great challenge. All the qualities of foresight, resourcefulness and energy which the industry has shown in the past will be required.

MR. DAVID ECCLES, Minister of Works, seen driving the first nail in the coffin of high building costs !

But expansion of production is not enough. There is widespread concern about the level of building costs. Greater productivity and lower costs are essential in the interests both of the country and of the building industry itself. I look to all in the industry — designer, manager, foreman, worker—to tackle these problems with vigour and co-operation. I am confident that in 1953 we shall see results.

FROM THE PRESIDENT OF THE R.I.B.A.

IT would be very pleasant if, at the end of 1953, we could refer with satisfaction to that year as having witnessed the disappearance of what is probably our biggest bogey in the industry—costs at an all-time peak, and production below par.

There is obviously something very wrong. Building has become so expensive as to create two utterly unsatisfactory alternatives for the building owner. One is to refrain from new building altogether ; the other is to put up with materials, finishes and workmanship which are not only sub-standard,

but certain to be costly in maintenance. This latter factor is one of the most dangerous; it means constant outgoings over the years ahead.

The dilemma is realised in the documents which are sent out by such bodies as the Universities. On the one hand there is the economy leaflet, recommending all sorts of methods of cutting and lightening construction, thereby eliminating precautionary safeguards. On the other, the leaflet which tells the architect that really good quality building, sound roofing, heavy gauge flashings, windows, downpipes, etc., are the best as well as the cheaper in the long run. The two leaflets, taken together, do not readily make sense.

The architect is faced every day with dilemmas of this sort. Such problems arise out of an unsound situation. Clearly, the brains of all of us have got to be applied, without delay, to the solution of this problem of increasing efficiency and lowering costs. To do this clearly entails close collaborative work by all members of the Building team. In the long run, it is our reputations, first, and then our livelihoods as free working members in a great national service, which are at stake.

We in this country are not unique in facing this problem. Our architectural colleagues in France are equally anxious; in the November issue of the S.A.D.G. *Journal* there is a leader on this very subject. It is headed, "Cry of Alarm."

Well, this is not perhaps a very cheerful message to the readers of *The Builder*. But since they include architects out of a job, and young men who can't get a start, and builders and craftsmen who are faced with cold realities, perhaps it is better to be frank. Think of the possible pleasure, a year from now, in saying that, by our own efforts, we have turned the corner. Here's hoping that can happen!

HOWARD ROBERTSON.

FROM THE CHAIRMAN, THE QUANTITY SURVEYORS' COMMITTEE, R.I.C.S.

AS Chairman of the Quantity Surveyors' Committee, R.I.C.S., I welcome the opportunity which you have given me of sending New Year greetings to your readers.

Thanks to the Ministers of Works and of Housing and Local Government, we enter 1953 relieved to some extent of the unproductive work which inevitably has accompanied licensing and controls. We are not without hope of further alleviation during the year.

The building industry is passing from a seller's to a buyer's market, and that in large measure is why the Ministers have felt able to free it from some of the shackles which war and shortages had imposed. The change, however, is due rather to the general play of economic forces than to any lessening of the tasks before the industry. There is much industrial building to be done, and urgently; we have hardly as yet touched the fringe of major war-damage reconstruction; despite the considerable progress made in new house building, housing and its ugly twin, slum clearance, are vital problems which remain to be solved.

But the return of the buyer's market and of some measure of freedom brings other prospects and new obligations. Of these, a reduction of building costs is of first importance.

The achievement of lower costs is an obligation which faces everyone concerned with building—building owners; architects; builders; operatives; suppliers of materials and quantity surveyors; all have a part to play: that is the challenge of 1953.

E. H. PALMER.

FROM THE PRESIDENT, THE INSTITUTE OF BUILDERS

IN sending this New Year message to the readers of *The Builder* I am reminded of one from the Minister of Works last year, that "the British standard of life depends upon production." Production has improved during 1952 and will, with increased effort and efficiency, continue to do so during the coming year. Indeed, it must do so until building costs reach an economic level. There is so much to do and other industries are so materially affected by building costs that if we are to sustain a proper balance of international trade we must attain the highest level of organisation, management and effort. We must encourage co-ordinated apprenticeship and a sufficient recruitment of lads into the building crafts; and we must strive to satisfy the need of trained and successful management by continuing to promote a sound basis of building education and practice.

Restrictions and controls have eased and will, we hope, diminish to vanishing point, giving the industry opportunity for efficiency and freedom to plan and work. May we look forward to 1953 for improvement in our standards and in our production; and may all sections of the industry work with good will, in peace, harmony and with a full measure of success, to mark this Coronation Year.

HAROLD H. RIDGE.

FROM THE PRESIDENT OF THE N.F.B.T.E.

I WELCOME the opportunity to send, through the columns of *The Builder*, a New Year message to the building industry. Following the Government's decision early in 1952 to expand the building programme, we have had an eventful and, I feel, successful year. In spite of the many difficulties arising from shortages of materials, restrictions of credits and particularly poor weather in the latter months of the year, we have responded well to all the calls made upon us.

We start off in 1953 in a spirit of even greater optimism than a year ago, for, in view of the recent decisions regarding the development charge, the raising of the licence-free repair limits and the modification of the housing licensing system in favour of greater scope for private enterprise, I feel that we are now well on the way towards complete freedom for the industry, with all the opportunities that gives for improved efficiency and higher output.

In fact, these must be our two principal aims during the coming year, for we all must know that the level of building costs is far too high to guarantee both full employment and continuity of work. We must remember, too, that the impact of the sliding-scale wage increase, due in February, and the recent extra week's holiday with pay award of the Industrial Disputes Tribunal, has still to be felt.

Let each and every one of us, therefore, start off the year determined to do everything possible to keep the cost of our work at the lowest level commensurate with sound construction and good quality workmanship. This means harder work all round, in the office as well as on the site, elimination of waste, efficient organisation of our jobs, the introduction of more mechanised tools and the application of bonusing methods wherever possible.

If we get the materials in sufficient quantities, and the responsible Ministers recognise that they are the principal key to the situation, then we shall find these tasks not so burdensome as they may appear to be at first sight and we shall finish up the year 1953 with an even better record of achievement than that of the past twelve months.

J. IAN ROBERTSON.

FROM THE GENERAL SECRETARY N.F.B.T.O.

I THINK the year just passed has presented evidence that the building industry, given the opportunity, is willing and able to play its part in the physical reconstruction of the country. One can but hope that peace, uneasy as it seems to be now, will continue so that our industry can proceed with its constructive mission of rebuilding the country. Unfortunately, it is not entirely within the power of the building industry to decide whether to build or not to build, for we are all largely confined within the strait-jacket of political decisions. We in the building industry are—and I am sure are proud to be—on the constructive side of humanity's many-sided activities, so it is to our own immediate interest as well as to a wider interest to encourage those who govern us to pursue peaceful ways. I know that houses are still tragically short; that standards of houses are not too lavish; that civic, industrial and commercial buildings of all sorts are very much needed; but none of this important work can be done while the wealth of the country is devoted to purposes extraneous to peaceful pursuits. I make no claim to a solution of our intricate difficulties, but hope merely that a solution may be found, for in that solution I am confident that the prosperity of the country lies. We want to see our people well and contented, for health and contentment reside in essential work well done.

May 1953 see at least the beginning of sanity in the world, and as a result may our country, in common with others, prosper! I wish particularly *The Builder* and its readers a happy New Year.

RICHARD COPPOCK.

FROM THE CHAIRMAN OF THE BUILDING APPRENTICESHIP AND TRAINING COUNCIL

JANUARY 1, 1953, marked an event of great importance for the building industry and for the Building Apprentice-

ship and Training Council. On that day the National Joint Council for the Building Industry took over from the Building Apprenticeship and Training Council, and will administer through the National Joint Apprenticeship Board the registration and certification of building apprentices.

Since 1945, when the present Registration scheme was put into operation, there has been very notable progress. The total number of registered apprentices has risen from 7,028 at the end of 1946 to 83,305 at the end of November, 1952. The building industry has always been responsible through its regional and local Joint Apprenticeship Committees for the recruitment and training of apprentices. It will now take over registration in addition. The National Joint Apprenticeship Board will also be responsible for welfare work. Under the Building Apprenticeship and Training Council in the last six years 29 scholarships have been awarded, each for three years' full-time study. Nineteen of these have been held for degree courses at Universities and ten for Higher National Diploma courses at Technical Colleges. The money for some of these scholarships has been found by the generosity of both sides of the industry and of the City Companies. The remainder have been provided by the Welfare fund, financed from fees paid by apprentices. Considerable sums have also been expended annually on prizes from the same source.

The objective before the industry will be in the future, as it has been in the past, to secure a sufficient number of well-trained apprentices to meet the future needs of building. The Building Apprenticeship and Training Council will continue its present advisory work on recruitment and training of apprentices, and in that capacity will offer advice to the Minister of Works and to the industry.

It remains for me to extend to the building industry on my own behalf and on behalf of all members of my Council our most cordial good wishes for 1953, and to wish all possible success to the new Registration scheme. On the general question of recruitment of apprentices I look forward to further steps being taken by the industry in 1953 towards a progressive solution of the problem.

GEORGE GATER.

FROM THE PRESIDENT OF THE FEDERATION OF ASSOCIATIONS OF SPECIALISTS AND SUB-CONTRACTORS

IT is only natural that, when asked for a New Year message to the industry, one should be anxious to find some ground for optimism. In other years this has sometimes been a difficult task but this year, I do not find myself in any predicament.

The industry's record for 1952 speaks for itself, and I believe that we are moving into a much healthier period, when a superfluity of work will no longer cushion inefficiency or create unnecessary shortages. It is true that some shortages still exist, but the prospects are to my mind undoubtedly brighter, giving great hopes of increased productivity.

If that is so, then a full measure of recognition must go to the producers of building materials for their success in increasing output and to Ministries for an increasingly sympathetic attitude towards the problems of the industry.

Some difficulties have still to be surmounted, but a number of restrictions have gone which in the past, unjustifiably perhaps, but understandably, gave us a feeling of frustration, and we now have an opportunity and a duty to show what we can do. The problem facing both sides of the industry is how to increase productivity and at the same time to reduce building costs. That must be our contribution to bringing down the cost of living and thus increasing purchasing power so that all in the industry and, indeed, the nation as a whole, may look forward confidently to easier conditions unjeopardised by spiraling prices and wage claims.

Both sides of the industry have to face up to these two linked and inter-dependent problems, and nothing could be more fruitless than for either side to seek to place the whole responsibility on the other. The problem, which is a national one, is far more important than the sectional interests of either.

I am confident that neither side will be found wanting or lacking in understanding of the other's difficulties. On that belief I found the confidence with which I look forward to the New Year, for which I send my best wishes for prosperity and good fortune to all sections of the industry, and particularly to the specialist and sub-contracting firms of our federated Associations.

FRANK WOODCOCK.

THE COST OF BUILDING

"The Builder" Chart, 1939-53

THE Chart on facing page shows the rise in wages, materials and building costs over the years 1939 to 1953. It has been specially compiled for *The Builder* by Mr. H. J. Venning, F.R.I.C.S., and is copyright.

The line of building costs has risen faster than the lines for materials and wages. This line is based on actual tenders for the normal run of building contracts. The line for materials is based on the figures published by the Central Statistical Office. The line for wages is based on a conventional average of one labourer to one craftsman, and takes account of the indirect increases in wages, consequent on payment for guaranteed time, travelling time, increases in insurance premiums, holidays with pay contributions by the employer, etc. (A list of the variations in wages from 1939 is given on the Chart.) The line does not include anything to do with incentive payments.

In 1952 the cost of materials continued to rise until about April, after which there was a drop in most materials.

The datum is 100, and the index of building costs, 327 a year ago, now stands at 320.

NEW YEAR HONOURS

FOLLOWING is our list of recipients of the first New Year Honours to be conferred by the Queen :

KNIGHTS BACHELOR

W. G. HOLFORD, F.R.I.B.A., Professor of Town Planning, University College, London.

W. O. HUTCHISON, President, R.S.A.

JAMES MILLER, Lord Provost of Edinburgh.

W. H. PILKINGTON, Chn., Pilkington Bros., Ltd., Vice-Pres. Council of B.M.P.

ROBERT BRUCE WYCHERLEY, M.C., Man. Dir., Abbey National Building Society.

Prof. W. G. Holford.

G.C.B.

SIR ERNEST ARTHUR GOWERS, G.B.E., K.C.B. For public services.

C.B.

W. H. GLANVILLE, C.B.E., Director, Road Research Lab., D.S.I.R.

K.B.E.

G. H. FRETWELL, C.B., Director-General of Works, Air Min.

COL. H. C. SMITH, C.B.E., Chn. of the Gas Council.

C.B.E.

OVE N. ARUP, Architectural Engineer.

E. E. HOPE BATE, M.B.E., M.C., Chief Works Eng., Min. of Works.

M. B. BLACKSHAW, A.R.I.B.A., Superintending Arch. for Hsng., Min. of H. and L. G.

F. J. BYWATER, M.C., Chn., Council for Codes of Practice, Constr. and Eng. Services.

R. B. CARNEGIE, O.B.E., County Surveyor Devon C.C.

T. L. LEES, Dep. Timber Contr., Min. of Materials.

O.B.E.

ARTHUR BATES, County Planning Officer Yorks, W.R., C.C.

WILLIAM GRIGOR, County Surveyor, Antrim C.C.

SIDNEY HORSFIELD, Gen. Sec., National Society of Painters.

W. F. LOWNIE, lately Dep. Chief. Arch. and Surv., Dep. of Agric. for Scotland.

BREVET COL. M. K. MATTHEWS, T.D., F.R.I.B.A., Chn., London Trustee Savings Bank.

A. E. L. ROBEY, lately President, Building Industry Distributors.

M.B.E.

G. V. GRIFFITHS, Borough Eng. and Surv., Port Talbot.

B. K. NIGHTINGALE, Surv., Sodbury R.D.C.

LESLIE PARKER, Surv. and Chief San. Insp., Flaxton R.D.C.

C. R. TOBITT, Asst. Essex County Surv.

D. R. WILLIAMS, Senior Partner, Williams Bros., bldg. and civil eng. contrs., Pontardawe.

B.E.M.

A. A. GLENNIE, Foreman Bricklayer, Battersea Gen. Stn., London Div., B.E.A.

R. A. J. SAVAGE, Carpenter and Charge Hand, Radio Res. Stn., D.S.I.R.

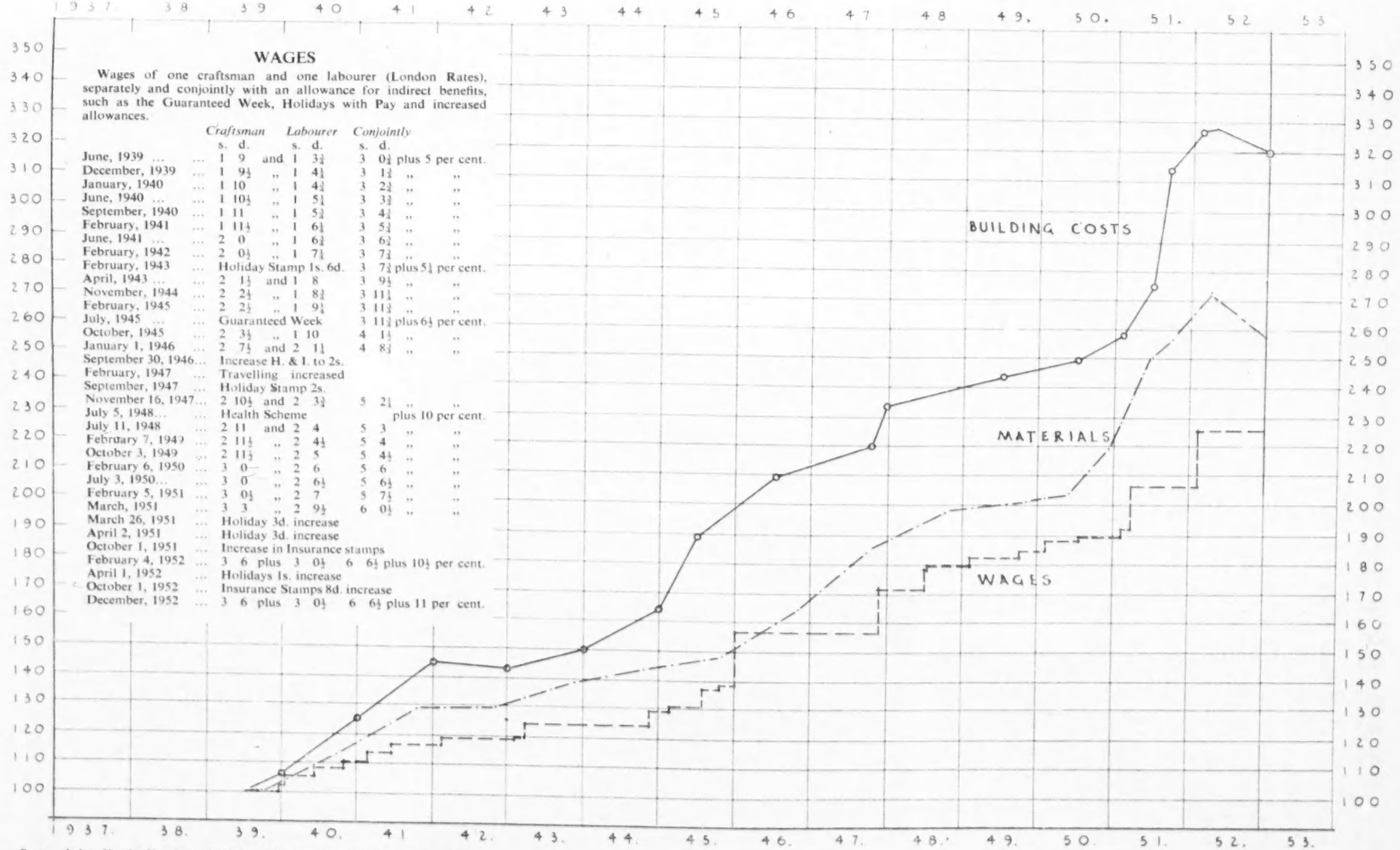
E. W. THOMPSON, Chargehand Carpenter, War Dept., Jamaica.

C. U. TRASK, Foreman of Works, H.M. Prison, Dartmoor.

WAGES

Wages of one craftsman and one labourer (London Rates), separately and conjointly with an allowance for indirect benefits, such as the Guaranteed Week, Holidays with Pay and increased allowances.

	Craftsman	*Labourer*	*Conjointly*
	s. d.	s. d.	s. d.
June, 1939 ...	1 9 and	1 3½	3 0½ plus 5 per cent.
December, 1939 ...	1 9½ ,,	1 4½	3 1½ ,, ,,
January, 1940 ...	1 10 ,,	1 4½	3 2½ ,, ,,
June, 1940 ...	1 10½ ,,	1 5¼	3 3½ ,, ,,
September, 1940 ...	1 11 ,,	1 5½	3 4¼ ,, ,,
February, 1941 ...	1 11½ ,,	1 6¼	3 5¼ ,, ,,
June, 1941 ...	2 0 ,,	1 6½	3 6¼ ,, ,,
February, 1942 ...	2 0½ ,,	1 7¼	3 7¼ ,, ,,
February, 1943 ...	Holiday Stamp 1s. 6d.		3 7½ plus 5¼ per cent.
April, 1943 ...	2 1½ and	1 8	3 9½ ,, ,,
November, 1944 ...	2 2½ ,,	1 8½	3 11¼ ,, ,,
February, 1945 ...	2 2½ ,,	1 9¼	3 11½ ,, ,,
July, 1945	Guaranteed Week		3 11½ plus 6½ per cent.
October, 1945 ...	2 3½ ,,	1 10	4 1½ ,, ,,
January 1, 1946 ...	2 7½ and	2 1½	4 8¾ ,, ,,
September 30, 1946...	Increase H. & I. to 2s.		
February, 1947 ...	Travelling increased		
September, 1947 ...	Holiday Stamp 2s.		
November 16, 1947...	2 10½ and	2 3¾	5 2¼ ,, ,,
July 5, 1948... ...	Health Scheme		plus 10 per cent.
July 11, 1948 ...	2 11 and	2 4	5 3 ,, ,,
February 7, 1949 ...	2 11½ ,,	2 4½	5 4 ,, ,,
October 3, 1949 ...	2 11½ ,,	2 5	5 4½ ,, ,,
February 6, 1950 ...	3 0— ,,	2 6	5 6 ,, ,,
July 3, 1950... ...	3 0 ,,	2 6½	5 6½ ,, ,,
February 5, 1951 ...	3 0½ ,,	2 7	5 7½ ,, ,,
March, 1951 ...	3 3 ,,	2 9½	6 0½ ,, ,,
March 26, 1951 ...	Holiday 3d. increase		
April 2, 1951 ...	Holiday 3d. increase		
October 1, 1951 ...	Increase in Insurance stamps		
February 4, 1952 ...	3 6 plus 3 0½	6	6½ plus 10½ per cent.
April 1, 1952 ...	Holidays 1s. increase		
October 1, 1952 ...	Insurance Stamps 8d. increase		
December, 1952 ...	3 6 plus 3 0½	6	6½ plus 11 per cent.



Prepared by H. J. Venning, FRICS, and copyrighted by "The Builder."

BUILDING COSTS, 1939-1953. *Plotted above are the fluctuations in Wages, Materials and Building Costs over the years 1939 (Datum 100) to January 1, 1953. The index stands at 320 as compared with 327 twelve months ago—a drop of 7 points. Inset in the page are variations in Wages, Allowances, etc., since June, 1939. (See facing page for explanatory notes.)*

PREFABRICATION

A National Opportunity

By D. DEX HARRISON, Dipl.Arch., ARIBA, AMTPI

BRITISH INDUSTRIES FAIR, this Coronation Year, is to have a "Prefabricated Village." This is the first time that prefabrication has featured at B.I.F., a sure indication of the importance the Board of Trade now attaches to this new industry.

For let us be under no illusion, we are witnessing the emergence of a new industry. Prefabrication as we know it to-day owes its being to the war and to the vast speculative and dynamic impetus which was the one fruitful outcome of that upheaval. The tremendous strides forward made in other spheres during those seven years constituted a challenge to building, the most backward and entrenched of all our major industries, and the reassessment that then took place focused attention on its many shortcomings in the light of present-day needs—its slowness and the enormous amount of precious labour power which it absorbed in a manner both inefficient in itself and accentuated to a quite absurd degree by dependence on favourable weather; the vast weights of material that had to be moved from place to place; its immobility once erected. The rapidity with which buildings become out of date and a burden on the community is but one glaring aspect of well-accepted but fundamentally unsound attitudes to building, involving a craving for permanence when all is impermanent and changing.

Fig. 1.—The Airey prefabricated house, illustrating direct derivation from the traditional model.

"TEMPORARY" PREFABRICATION

Thus there sprang into being the temporary housing programme to fulfil an immediate need. It is worth bearing in mind that "temporary housing" automatically implied in everyone's mind prefabricated housing, for it was the necessity for speed that called this programme into being. The best of these "temporary" dwellings will last the proper life span of a house and it is regrettable that they were deliberately made sub-standard in accommodation and siting. There were not wanting those who saw prefabrication merely as a stop gap to hold the field until more normal methods of building could be reorganised, and these prophets of gloom were able to show that, after the 1914-18 war, just such a movement had arisen. Indeed, during the early 1920s thousands of prefabricated dwellings had been erected (and are still being lived in) but, almost without exception, they were uncompetitive in cost with the traditional product and fell out of the market as soon as labour became plentiful and cheap after the post-war boom.

Those who prophesied that the same thing would happen to-day appear to have been correct in their diagnosis, for there are indications that the same thing is now happening in the housing field, but, in my opinion, this is a very superficial view of current trends, which ignores some fundamental differences between the position as it exists now and as it existed 30 years ago.

A CHANGE IN OUTLOOK

The basic change is one of outlook. When the whole foundations of civilisation are imperilled, a static, permanent view of the future is no longer tenable and to build every structure as though it were to last several hundred years is clearly foolish and improvident. Furthermore, new industries and techniques have arisen, only awaiting the opportunity to contribute to new forms of building, and their products have been proved in the aeroplane, the motor car and the ship. Lastly, this country must now export to its limit or die, and a vast field for capital export goods in the building sphere is awaiting in markets overseas.

It is for this last reason that the Board of Trade has become so interested in prefabrication. There always has been a substantial export market in quality building products like metal windows, sanitary ware, and in basic products such as structural steel and cement, but you cannot go beyond this and export traditional buildings. Of their very nature they are local and static and, furthermore, the shortage and cost of labour is even more compelling a factor in the developing countries than it is here.

Prefabrication, therefore, in the very nature of economic necessity has come to stay and it needs only to develop the necessary technical accomplishment to achieve its niche in our present-day economy. A review of the present state of technical accomplishment reveals a curious situation. We can distinguish three main and distinct lines of development representing the domestic sphere, schools and the export market.

LINES OF DEVELOPMENT

The prefabricated house was first in the field. Many hundred schemes were put forward and some went into production. The more elaborate types suffered from the disadvantage that they had to be produced in very large quantity before they became an economic proposition, and only those few types which secured substantial orders were able to carry on; the others dropped out. A group of what might be classed as "alternative" types, mainly based on concrete slabs, have developed a steady market and offer some reduction in site building time, but, despite claims for economy in this and that respect, the final cost works out comparable with the traditional house. With all this endeavour, prefabrication has added virtually nothing to technique in this sphere, and this doleful result is not entirely the fault of the prefabricator. The prefabricated house is made to look and function as nearly as possible like the traditional house and is judged by the degree to which it approximates to this ideal. Being always regarded as a substitute, in a field impregnated to the core with tradition and prejudice, it is doomed to a slow lingering death, with but one slender hope which we shall touch on in dealing with exports.

In the building of schools, on the other hand, there has been no devitalising tradition to live down. By common consent, existing school buildings are regarded as obsolete though of only too solid structure. A vigorous and enlightened authority called for new conceptions and ideas and discovered that prefabricated methods lent themselves very well to the newly formulated

planning and design requirements. Nor did the fact that most of the earlier schemes produced were crude and groping in technique deter; on the contrary, a measure of initial failure was accepted as part of the price to be paid for development work, and this policy, after seven or eight years, is beginning to reap its reward in fresh and vital designs which answer the educationist's requirements far better than traditional methods can hope to do.

ENLIGHTENED SPONSORS

The prerequisite of this achievement lay in the presence of one or two enlightened sponsors or patrons who were able, because of the size and continuity of their programmes, to initiate and guide the necessary large-scale industrial processes. Equally important was the fact that this initiation was controlled and organised by architects working from these design requirements and evolving structural solutions to satisfy them. Too much prefabrication has started at the other end as a result of the need of manufacturers to employ their productive capacity. This type of approach has led to methods of prefabrication which as often as not fail to fulfil the needs of the building, being designed rather to sell some particular product, and the Ministry of Education have found it necessary to step in and redesign many of these schemes to facilitate their application.

The pioneer work of the Hertfordshire County Council must be specially mentioned in this context. They have succeeded in completing a large number of schools in a short time, and their latest work is literally breath-taking in its technical audacity and promise for the future.

WORKING TO MODULE

This development work on school building has been greatly facilitated by the adoption by the Ministry of Education of a standardised module, 3 ft. 4 in., to which all the differing systems may adhere. I have discussed this particular aspect of the problem recently in this newspaper (*The Builder*, October 24, 1952) and do not propose to labour it again here, although it is one of the reasons why prefabrication is succeeding in this field and failing in the housing field, and its absence will, in due course, act as a limitation in the export field unless early action is taken.

Paradoxically enough, the export of prefabricated houses flourishes. This ought to serve as a warning to our own housing experts that something may be wrong in their belief that prefabrication cannot be used in housing in this country. No export will flourish long which is rejected in its country of origin, or which has no home market to fall back on and bulk out the orders into competitive and stable proportions. This country, by its pioneer work in schools and, earlier, in housing, has built up a splendid reputation abroad during the past few years, on which

Figs. 2a & b.—Southill School, Hemel Hempstead. Harrison and Seel, architects, in collaboration with C. H. Aslin (County Architect). The earlier Hertfordshire County Council method of construction based on the Hills light steel framework and on an 8 ft. 3 in. planning grid.

Fig. 3.—Ministry of Education school at Wokingham, also based on the Hills light steel framework adapted to full modular co-ordination on a 3 ft. 4 in. grid.

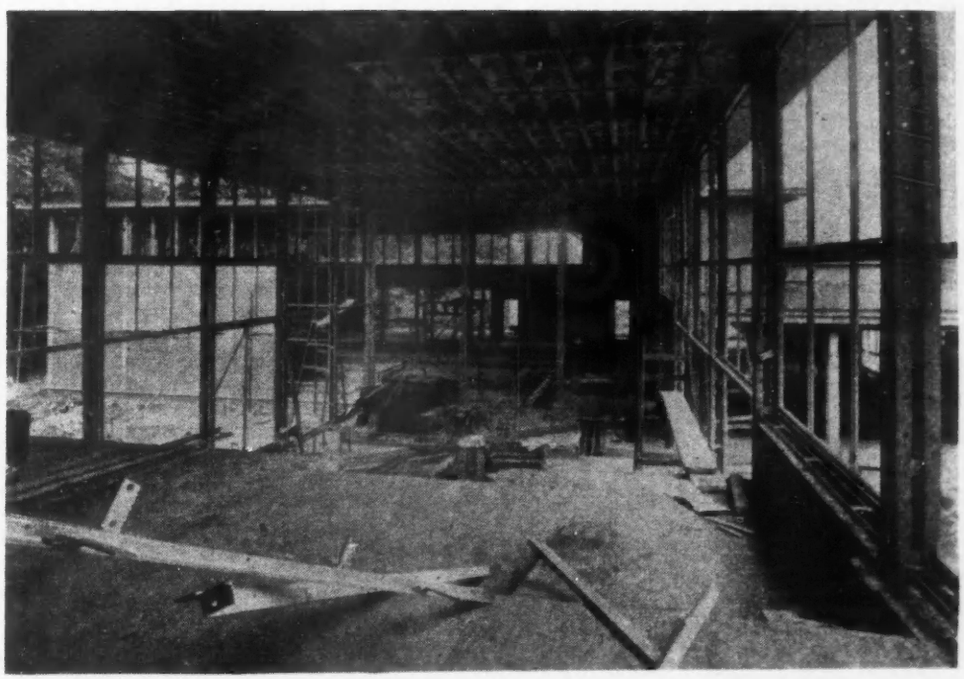


Fig. 2a.

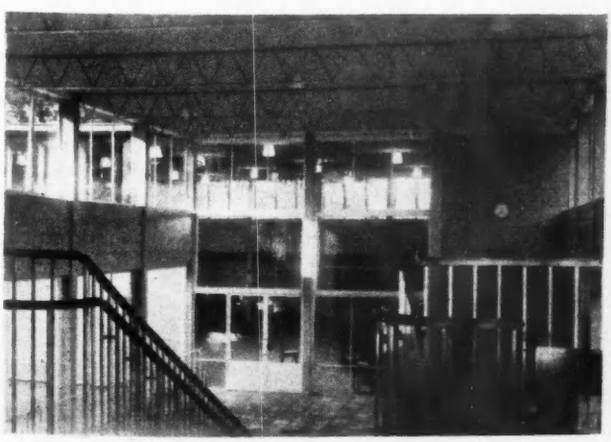


Fig. 2b.

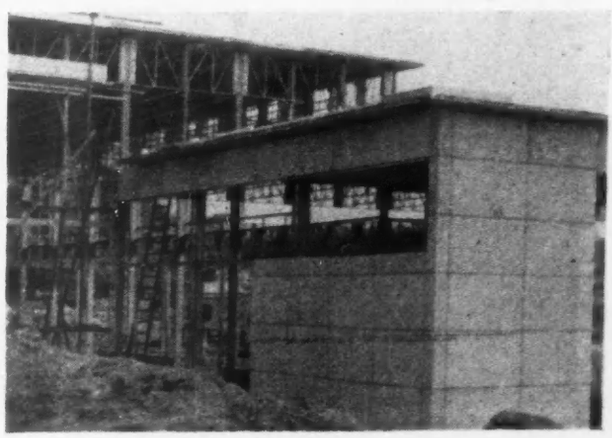
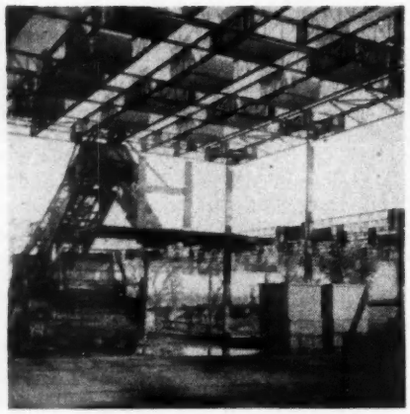
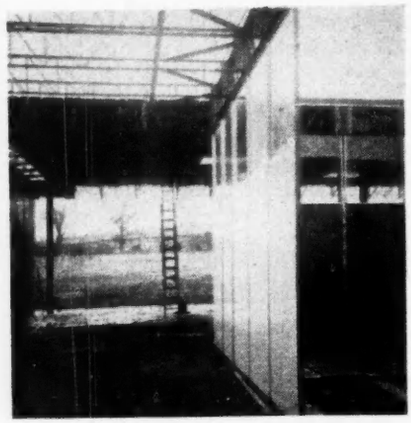


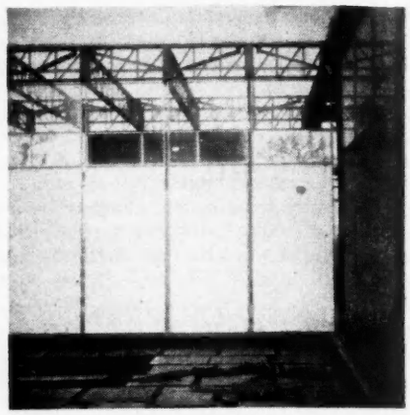
Fig. 3.



Erection of steelwork of assembly hall. Note roof light casings on right.



View showing modular external wall panel $1\frac{3}{8}$ in. overall.



This view shows wall panels and beams on a modular grid.

Fig. 4.—Hertfordshire County Council school, Furze Hill, Boreham Wood, C. H. Aslin (County Architect). One of the latest Hertfordshire schools based on the Hills light steel framework and full dimensional co-ordination on the 3 ft. 4 in. grid.

reputation a very substantial export market in prefabricated building products is being established. One looks in vain, in this field, for the brilliance of conception which characterises our newer school building. Many of the products are developments from the unit timber structures that have been exported from several countries for years past, made a little more solid and given plenty of insulation. The school systems would not, of course, export as they stand, since the export model must be designed with packaging and transport in mind, but the market needs to see the very best of our products or it is in danger of having attached to itself the stigma that became attached to the temporary housing programme, and lasting harm will ensue.

HAPHAZARD DEVELOPMENT

Reviewing the whole field, we cannot but be conscious of the haphazard nature of much of the development that is proceeding in so many watertight compartments. There is no correlation between house building, school building or export. There is no concerted attempt to use the techniques in other fields, or to marry them into the traditional building fabric. There is very little material encouragement from above to do so.

Why is it that all the new towns, which could have been patrons par excellence, have turned out to be the most orthodox of ordinary suburbs ?

Only the presence of one patron in the grand manner—the Ministry of Education —has saved the day, and this patron is, naturally enough, concerned only with one aspect of the whole. For the rest we are patronless. Serious prefabrication, involving as it does vast outlays of capital, needs the sort of sponsoring which is given to the development of aircraft, and for the same reason—to keep this country in the van of exporting countries, and I think a proper evaluation would put us several years ahead of our competitors, a position we should not lightly relinquish.

Fig. 5.—The Riley-Newsum export house designed for the Canadian market. The photo shows progress in erection made in 2 hours.

BOOK REVIEW

INDOOR PLANTS AND GARDENS. By Margaret E. Jones and H. F. Clark. Edited by Patience Gray. Illustrated by Gordon Cullen. (Architectural Press.) Price 18s.

ROOM PLANTS have become not only fashionable but popular, as architects and interior decorators more and more have made use of certain foliage plants to provide some contrast to the austere finishes of contemporary buildings.

This book makes its appeal in that it does not attempt too much, but selects about 100 plants and gives good advice on the practical matter of their care, under the headings of light, position, temperature, watering and soil. This very essential information is of the greatest use to the architect and to the designer and of course to all who grow room plants in their homes, as one cannot know instinctively whether a plant likes light or shade, cool conditions or warm, moisture or dryness.

The drawings by Gordon Cullen are delightful and show much better than most photographs the essential form, texture and tone of a number of the plants. "Pilea Cardierei" on page 87 is a typical example; the drooping leaves with their metallic sheen are most convincingly drawn.

The photographs show a wide variety of examples of the use and disposition of room plants. Some indicate rather whimsical arrangements of plants in association with sculpture, pottery and basket work, and the authors wisely throw out a word of caution about the risks of overdoing such arrangements. There is no doubt that plants look their best when seen growing in simple pots or tubs or troughs, made of the normal flower pot material. Not only does the plant seem to be more at home, but the decorative value of its shape, colour and texture is not in competition with that of its container.

In exhibition work and in commercial displays which can be replanted frequently anything is permissible, and some lively examples are shewn.

Undoubtedly the Danish Winter Gardens are the most successful. Displays of adequate size, plants of contrasting forms and colours, all appear to be growing in ideal surroundings where watering and spraying can be done with ease. The Danes have a feeling for indoor plants and treat them well.

A. R. F. A.

A general view of Ibiza

IBIZA: A Mediterranean Pearl

By ARTHUR W. KENYON, CBE

(With sketches by the Author)

IBIZA is spelt and pronounced in all manner of ways—but why worry? No matter what you do about it, it is sure to be wrong!

One of the smaller Balearic Islands off the Spanish coast, Ibiza is approached from the Spanish mainland by boat from Barcelona or Valencia and from Majorca by boat from Palma. It has a distinct character of its own—and so far unspoilt by tourists—remains natural and the daily work goes on in an industrious way. The island is about twenty miles in length and about ten across, with indifferent and bad roads radiating from the town of Ibiza to the few villages scattered about the island. The traffic is into the town rather than out of it, and villagers daily bring their goods to the market in carts drawn by horses or mules, or sometimes donkeys. The motor car is not yet in use for this purpose, no doubt the reason why the roads remain primitive and suitable for animals and carts only.

A WHITE TOWN

The town of Ibiza has a population of 10,000 inhabitants, closely packed in houses within the old walls and grouped outside the walls to the harbour. It is definitely a white town, and as one approaches it by sea it stands out almost as a white cliff surmounted by the brown stone medieval cathedral and museum. The houses are kept white by the people themselves, women mostly, constantly whitewashing as far as they can reach with a small brush on the end of a long stick.

There are some new buildings but these follow very much the old pattern. Many of the older houses have flat roofs with a slight parapet, arranged to collect rainwater with outlets to drain into tanks. Other roofs are usually very flat-pitched and covered with stone-coloured Roman tiles, the eaves projecting slightly; as there are no gutters, the pattern of the tiles gives a very pleasing cornice effect. The cupolas to the churches are steep-pitched and tiled in the same way in a most ingenious manner. Windows generally have louvred shutters, mostly kept closed. The upper windows are often fitted with iron balconies, and when the windows are open an outside white blind is suspended from the top of the window and draped over the front of the balcony. The balconies support posts with lines suspended from them for hanging out the clothes. Strangely enough, these are not as unsightly as one might imagine, and as clothes dry quickly, they do not remain out all day.

The town is divided into the upper part built within the old walls and the lower part, built on reclaimed land from the sea and called Marina. The buildings are of almost equal medieval character in both parts of the town. One thing which impresses is the smallness of the individual dwellings, yet, even in what one might think of as the poorer quarters, they are spotlessly clean and tidily furnished.

Ibiza is not a holiday town, yet it is a lovely place to spend a holiday. There is one hotel and a few *pensions* and tourists appear only to halt on their way to other parts. Visitors staying in the town are few. The quay is very attractive and beautifully tidy and clean; the scene is of great activity, large sailing vessels constantly coming and going with all manner of goods. Timber seems to be a big export, mostly pine which grows on the hillsides but is not of building quality. Loads come on to the quay and are soon stowed away in the large two- or three-masted ships. Huge stone building blocks come in, perhaps from other parts of the island. Apricot pulp is an export, and figs, almonds and olives. Salt is a big industry, but operated from another part of the island. Shops abound everywhere and supply every-day things for daily use; they seem always to be open. They often run from one street to another with a shop window in both streets. Souvenirs are rare and not in good taste. Hand-made lace is still made, and is quite fine and very beautiful.

A FINE STREET

There is one quite well laid out street, the Boulevard Paseo de Vara de Rey, with quite good five-storey buildings on either side, of offices, bank, post office, etc., on the ground floor and flats above. This boulevard is used as a promenade alternately with the quay. There are some open-air cafés here, which are well patronised, especially in the evening. The central fruit and vegetable market is an

IBIZA VIEW FROM LOWER TOWN

old classic stone building open on all sides, surrounded by trees which almost blot out the building itself. It is a very busy place in the morning. The meat and fish market is a more modern building which is active in the mornings. The church of Santo Domingo, lower down in the old town, is a very interesting example of the tiled cupolas which are found on the smaller churches throughout the island.

The Old Town, Ibiza

The upper town is approached by a very steep incline from the lower town by way of the main gateway in the old walls. There is a steep ascent to the cathedral which is situated on the top of the hill, 300 ft. above sea level.

The ascent is through narrow cobbled streets, opening out occasionally into quite wide open spaces. In one of the spaces a modern school has been built in pleasing character, again all white, from which there is a wonderful view of the lower town and the sea. There are some quite large houses in this part of the town, with charming entrance porches. There is much to learn from these entrance porches in the design of our modern flats of to-day. They are ample in size and beautifully maintained, and a gracious staircase leads to the upper parts. There was a feeling of privacy although obviously used by a number of families. The mean entrances in our modern flats are squalid compared with them.

The upper cathedral square is magnificent and there are fine panoramic views over the whole town and harbour, and of the distant small islands of the Mediterranean. The Cathedral itself is rugged and not greatly inspiring. It has great projecting square buttresses supporting the nave similar in character to the cathedral at Palma but much simpler and less massive. The tower is architecturally insignificant, but the view afforded from the top is truly magnificent. The entrance doorway set in a blank stone wall is quite fine in its simple classic manner. The interior is spacious but poorly decorated.

On the opposite side of the square from the cathedral is a small but very charming late Gothic building, La Curie, quite rich in character, indicating that some of the older buildings of that period may well have been destroyed.

The Castle, approached from the square, is now used as barracks. It is coloured with red ochre for no apparent reason, but strangely is not conspicuous amongst the stone buildings. Approached by a wide steep external flight of steps is the Episcopal Palace, a clergy Court House and residence. This steep approach is very well laid out with flowering shrubs. The museum is a simple, square, modern building forming one side of the square, containing very rich relics discovered from time to time dating from the Carthaginian period. It is situated on the site of the old Necropolis, one of the most interesting archaeological monuments of its kind, consisting of some 3,000 subterranean chambers cut through the solid rock of the hill and containing numerous stone sarcophagi and ancient implements thought to be of Carthaginian origin. One of these chambers has been restored.

It is difficult to tire of this upper part of the town which can be approached by so many alleyways that one keeps finding fresh items of interest such as ancient doorways, elaborate Gothic windows, fascinating interiors and quaint little gardens.

IBIZA COMES TO LIFE!

The town comes to life about 8 o'clock in the morning when the buses come in from the outlying districts of San Antonio, San Jose, San Eulalia and San Miguel, bringing in the people for their daily work or shopping, weaving round mule carts loaded with goods for the market. Trips are arranged from Ibiza to these various small places but they are somewhat spasmodic and not to be relied upon, and it is therefore often necessary to make one's own arrangements. There are taxis which can be hired, but they are expensive. There are no railways on the island.

There is little evidence of culture but the islanders are polite, not only amongst themselves but also to foreigners, and it is so pleasant to find this friendliness without servility amongst all classes.

Entrance Hall, Old Town, Ibiza

For those who weary of wandering about an old town, or of sitting on the quay with a drink in hand, watching the activity of the shipping, or resting on the breakwater looking out upon the vast expanse of the deep blue waters stretching far away with never a ship in sight, there is the country of the island to fall back upon.

Across the harbour is the beach of Talamanca. This can be reached by a small petrol boat which goes twice a day. It is only 10 minutes away by water, or you can go by road—a shadeless and dusty road but partly passing through cultivated fields with olives, figs and pomegranates. Each holding has its stone gateway and ornamental iron gate marking the entrance. Talamanca beach has

Old Church, Santo Domingo

quite extensive sands and is ideal for bathing. There is a small pleasingly designed and well-equipped restaurant and *pension* there with dressing-rooms and sun-bathing arrangements—all delightfully peaceful because there are never more than a dozen people or so there at any time.

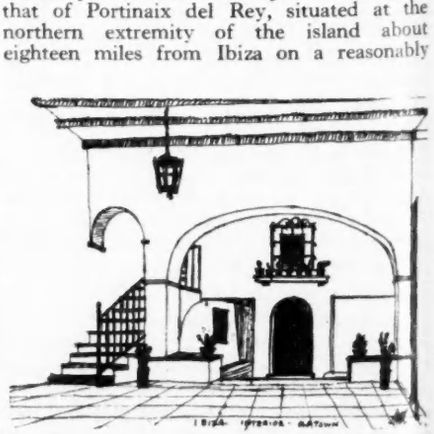
If, however, it is a bathing holiday which is sought, then the small town of San Antonio is the place. Small as it is, it is well supplied with good hotels and the tourist trade is obviously increasing. San Antonio is situated on the west coast, about ten miles from Ibiza, and is reached by motor coach twice a day. The town is built round the beach and there is little else besides a few small flat-roofed houses and the white church with its open portico at the back of it. There is a beautiful sandy beach set in a sheltered bay and blazing in the sunshine; what more ideal spot for a lazy and restful holiday with evening meals taken in the open in the light of coloured fairy lamps?

This place might easily become spoilt by the small but rather pretentious villas which are getting dumped on the best part of the bay. A large high block of barracks is just being completed of indeterminate style, poorly sited and somewhat of an intrusion. However, things happen that way in all countries.

BATHING PLACES

There is another bathing beach on the east coast about six miles from the small town of San Eulalia, approached by a very rough cart track through beautifully cultivated farm lands with rich orange-coloured soil terminating in a lovely bay with a sandy beach. Great rocks jut out into the sea, making it seem almost bluer than the bluest Mediterranean. There are no habitations except the odd farm shed and a small *pension* and restaurant where drinks can be obtained. It is undoubtedly the most perfect natural bay that one could imagine. The town has the usual village street with modern white villas. On the top of the hill approached by steep steps and rough slopes is the old church with its solid and simple construction, fortress-like in character, yet internally almost brilliant.

Perhaps one of the most spectacular bays is that of Portinaix del Rey, situated at the northern extremity of the island about eighteen miles from Ibiza on a reasonably



An Interior, Old Town, Ibiza

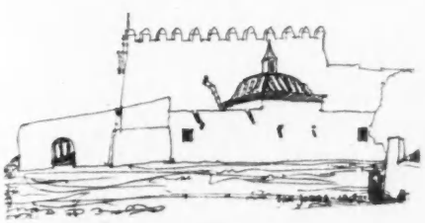
San Eulalia

San Juan

San Miguel

San Jesus

San Mateo



San Jorge

good road as far as San Juan. Or you may halt at San Juan to see another simple white church with its cool portico and domed chapel and with a small stone belfry. A few houses, a shop or two—and that is the village!

In the same district is the village of San Miguel which can be approached from San Juan by mule track, but if you are motoring it is simpler to go back to Ibiza and start again! San Miguel has a church, a few houses and a bar. The church is very charming as it is approached through an architectural screen with the columns painted on which is quite common in other parts of Spain.

To complete the picture of this area of the island there are two more churches, San Gertrudis, which is quite ancient with beautiful tiled dado inside rich in colour like tapestry, and San Jesus with its four-arcaded entrance porch, two of the arcades being filled in solid.

San Mateo is another small village some ten miles north of Ibiza with again a church and a restaurant or bar—nothing else. I discovered the reason for the bar in proximity to the churches, for I was able to witness a fiesta one Sunday morning where this bar was being very freely used.

There are several small villages throughout the island, very similar in character to those mentioned. The churches are worthy of special consideration because they are quite different from what one is accustomed to find. Externally they are a study in mass and composition and grow out of the ground in a natural way without any forced artificial setting.

To complete my picture I must mention the salt lakes; these are five miles away from Ibiza on the southern tip of the island. On the way out you pass through the village of San Jorge with rather more houses than is usual but with still another striking church with Moorish influence with a battlemented coping and the Roman-tiled cupola of the chapel. From here it is only a short way to "The Canal" or artificial salt lakes, which are world-famous, the export of salt being one of the chief industries of the island.

To sum up the island of Ibiza, what is there to commend it as a place to spend a holiday? Blue sea, blue sky, bright sunshine, soft breeze. You can wander round the old town itself, sit on the quay or go to a part of the island where there is bathing; there is magnificent scenery along the coast, soft, pine-covered hills, 1,500 ft. high inland; you will find kindly people and native food—garlic, yes, but with a bottle of red wine. You will eat meat (not too good), fish—coarse Mediterranean fish with lemons from the tree—sardines not out of tins, but arranged in beautiful patterns in circular boxes; grapes, figs and rich sweet melons in plenty.

Live as the people live, feed as they feed, and you will be happy. If you expect sophistication, don't go! Lunch late, take a siesta till five o'clock, and then dine at 9 or 10 p.m., followed perhaps by a drink at an outside cafe where the warm breeze seems to embrace you as you look out to that vast expanse of moonlit sea—the Mediterranean!

R.I.B.A. PRIZES AND STUDENTSHIPS

Juries' Report and Awards

THE report of the juries for R.I.B.A. Prizes and Studentships for 1953 was made known at the general meeting held on Tuesday night at 66, Portland-place, W.1, as follows:—

THE ROME SCHOLARSHIP IN ARCHITECTURE, 1952, OFFERED BY THE R.I.B.A. (value £400 a year for two or three years): Mr. D. I. Black (A), School of Architecture, Edinburgh College of Art.

THE R.I.B.A. INTERMEDIATE DESIGN PRIZE, A CERTIFICATE AND £100: 400 competitors took part in the Preliminary Competition and of these 10 were allowed to proceed with their final drawings. The Jury recommend that the R.I.B.A. prize be awarded to the design submitted by Mr. M. E. Rutledge (Student R.I.B.A.).

THE VICTORY SCHOLARSHIP AND £120: 156 competitors took part in the Preliminary Competition, and of these seven were allowed to proceed with their final drawings. The Jury recommend that the award be not made. The Jury also recommend that Certificates of Honourable Mention be awarded to the drawings submitted by Mr. F. H. Brown (Student R.I.B.A.) and Mr. R. W. Brunskill (A).

THE R.I.B.A. SILVER MEDAL FOR MEASURED DRAWINGS AND £75: The Jury recommend that the award be made to the drawings submitted by Mr. Tadeusz Lesisz, Oxford School of Architecture.

THE OWEN JONES STUDENTSHIP, A CERTIFICATE AND £100: The Jury recommend that the award be made to the drawings submitted by Mr. J. A. Wells-Thorpe (Student R.I.B.A.).

THE R.I.B.A. ALFRED BOSSOM RESEARCH FELLOWSHIPS FOR POST-GRADUATE RESEARCH: The Jury recommend that the fellowship be awarded to Mr. Edward D. Mills (F).

THE R.I.B.A. SILVER MEDAL FOR AN ESSAY AND £50: The Jury recommend that the award be not made. The Jury also recommend that a Certificate of Honourable Mention be awarded to the essay submitted by Mr. J. Brandon-Jones (A).

THE ARTHUR CATES PRIZE, A CERTIFICATE AND £80: The Jury recommend that the award be made to Mr. Gordon Graham (A).

THE NEALE BURSARY, A CERTIFICATE AND £100: The Jury recommend that the award be made to Mr. R. T. Clough (A).

THE HUNT BURSARY, A CERTIFICATE AND £75: The Jury recommend that the award be made to Mr. E. H. Jamilly (A).

THE BANISTER FLETCHER SILVER MEDAL FOR AN ESSAY AND £26 5s.: The Jury recommend that the award be made to the essay submitted by Mr. G. T. West (Student R.I.B.A.). The Jury also recommend that a Certificate of Honourable Mention be awarded to Mr. J. B. Weller, Birmingham School of Architecture.

THE R.I.B.A. SILVER MEDAL AND £10 IN BOOKS FOR STUDENTS OF SCHOOLS OF ARCHITECTURE RECOGNISED FOR EXEMPTION FROM THE FINAL EXAMINATION: Mr. G. A. MacNab (Student R.I.B.A.).

THE R.I.B.A. BRONZE MEDAL AND £10 IN BOOKS FOR STUDENTS OF SCHOOLS OF ARCHITECTURE RECOGNISED FOR EXEMPTION FROM THE INTERMEDIATE EXAMINATION: Mr. A. D. Bell (Student R.I.B.A.). Certificates of Honourable Mention were awarded to: Mr. T. H. Duncan, School of Architecture, Edinburgh College of Art; and Mr. K. G. A. Feakes, Oxford School of Architecture.

THE ARCHIBALD DAWNAY SCHOLARSHIPS, 1952. THREE SCHOLARSHIPS OF £60 EACH FOR THE ADVANCED STUDY OF CONSTRUCTION: Mr. K. G. A. Feakes Oxford School of Architecture; Mr. N. R. Grimwade, Architectural Association School of Architecture; and Mr. J. D. Robertson, School of Architecture, Edinburgh College of Art.

THE R.I.B.A. HENRY JARVIS STUDENTSHIP AT THE SCHOOL OF ARCHITECTURE, THE ARCHITECTURAL ASSOCIATION, 1952. £50: Mr. P. Matthews (Student R.I.B.A.).

THE R.I.B.A. HOWARD COLLS TRAVELLING STUDENTSHIP AT THE ARCHITECTURAL ASSOCIATION, 1952, £15 15s.: Mr. K. R. Darby.

THE R.I.B.A. DONALDSON MEDAL AT THE BARTLETT SCHOOL OF ARCHITECTURE, UNIVERSITY OF LONDON, 1952: Mr. C. W. Arnold (Student R.I.B.A.).

THE R.I.B.A. ANDERSON AND WEBB SCHOLARSHIP AT THE SCHOOL OF ARCHITECTURE, CAMBRIDGE UNIVERSITY, A CERTIFICATE AND £55, 1952: Mr. J. C. Newberry.

R.I.B.A. PRIZES FOR PUBLIC AND SECONDARY SCHOOLS: (a) *R.I.B.A. Prizes for Essays.* The Jury recommend that the following awards be made: (1) A prize of £2 2s. to David R. Bennetts of Manchester Grammar School, for his essay on Middleton Parish Church; (2) A prize of £2 2s. to Geoffrey Holland of Manchester Grammar School for his essay on the Church of St. Peter, Prestbury, Cheshire.

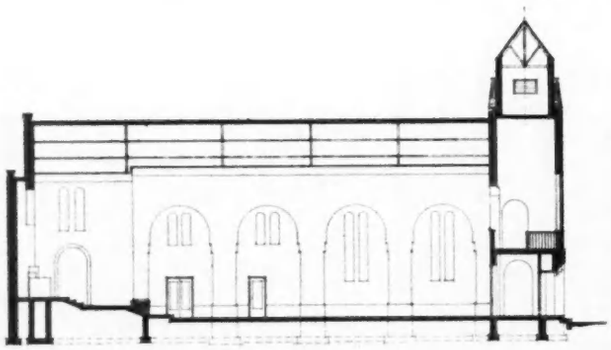
(b) *R.I.B.A. Prizes for Sketches.* The Jury recommend that the following awards be made: (1) A prize of £4 4s. to Ian McNab of Derby School for his drawing of Wollaton Hall, Notts; (2) A prize of £2 2s. to J. G. Rushman of Northampton Grammar School for his drawings of Hardwick Church, Northants.

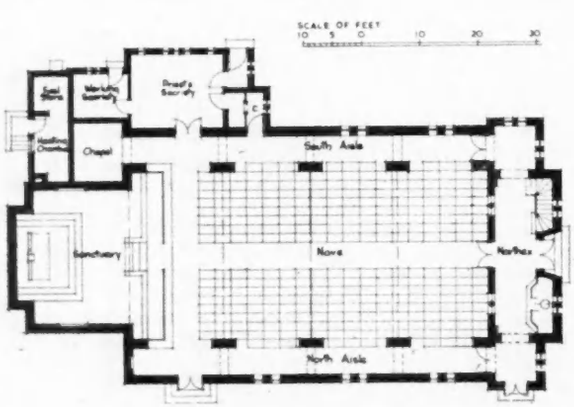
THE ATHENS BURSARY AND £125: The President of the R.I.B.A., in consultation with the Officers of the Board of Architectural Education, has awarded the Athens Bursary and £125 to Mr. Ralph Cowan (A).

Most of the competition drawings will be on exhibition at the R.I.B.A. until February 4. The President, Mr. Howard Robertson, A.R.A., will present the medals and prizes for 1953 at a general meeting to be held at 66, Portland-place, W.1, on February 3, at 6 p.m., and a criticism will be given by Mr. Howard V. Lobb, C.B.E., of the work submitted.

General view of the church. Below : Plan and longitudinal section.

CHURCH OF ST. THOMAS MORE, KNIGHTON, LEICESTER





REYNOLDS AND SCOTT, F/ARIBA, ARCHITECTS

THIS church was built to serve the needs of a growing Catholic parish in Leicester. The site is at the junction of four important roads in a residential area. The church is designed to seat 300, all accommodated in the nave with a clear and uninterrupted view of the sanctuary and altar. On either side are narrow aisles used for access and processional purposes only. The sanctuary is slightly narrower in width than the nave, and the ceiling slightly lower, but apart from this break in the walls and ceiling no other feature has been introduced which might obstruct the view of the sanctuary from the nave. On either side of the sanctuary a small side chapel with an arched opening terminating each side aisle was designed. That on the north aisle has been omitted for the time being. From the south aisle double doors give access to the priests' sacristy, and from this doors lead to a small working sacristy, priests' confessional and a side entrance porch. At the west end a narthex is provided, from which a small staircase ascends to the choir gallery over. The baptistery is formed in the recess at the side of the main west door.

There is a low dark red rustic brick plinth around the nave and side aisles, and the walls above are plastered. The ceiling is ¾ in. insulating board in 3 ft. by 3 ft. panels, V-jointed with chamfered edges and supported by the " AnD " system of invisible fixing. The floor to the main

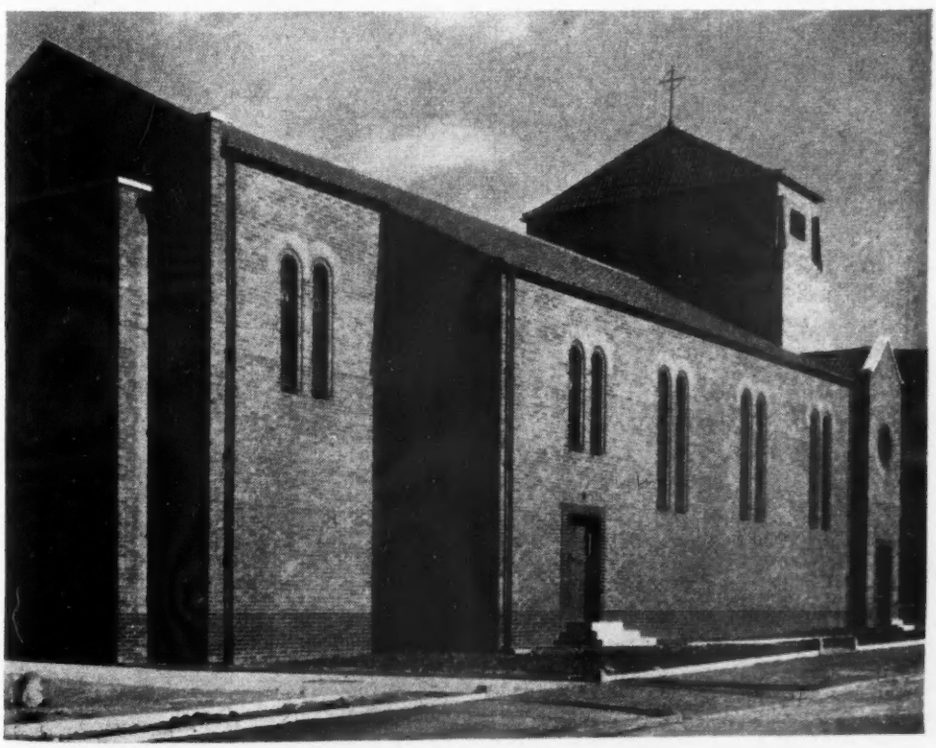
body of the church is covered with buff coloured semastic tiles. The sanctuary is paved in mosaic with marble treads and risers. The communion rail and pulpit are of reconstructed marble. The altars, which are designed to be permanently draped, are built of reconstructed stone. The baldachino over the high altar is timber framed and faced with plywood and was built by the general contractors. The supporting columns are of wood turned from the solid. The baldachino top is painted in a pastel shade of green, with the moulds and ornamentation picked out in metallic bronze. The column shafts are painted metallic bronze. All colour and enrichment has been confined to the sanctuary as the focal point of the interior. The rest of the church has been painted a pale cream relieved only by a light oak graining on the doors and a series of small red and blue embossed glass emblems contained in the simple leaded lights to the windows. The benches, the furniture and fittings in the sanctuary and sacristies were all made by the general contractors.

Externally, the west front has been built up as a broad flat tower over the choir gallery and provides a belfry in the top. The crucifix is in artificial stone. The roof over the aisles, nave and sanctuary is covered with Reynardo red tiles. Facing bricks are a mixed buff-coloured rustic set in sand-lime-cement mortar and finished with a rubbed flush joint. The arches to the semi-circular headed windows and the rings to the circular windows in the porches were formed in plain tiles of a colour to match the general tone of the brickwork. The quantity surveyors were Messrs. T. Sumner Smith and Partners, of Manchester.

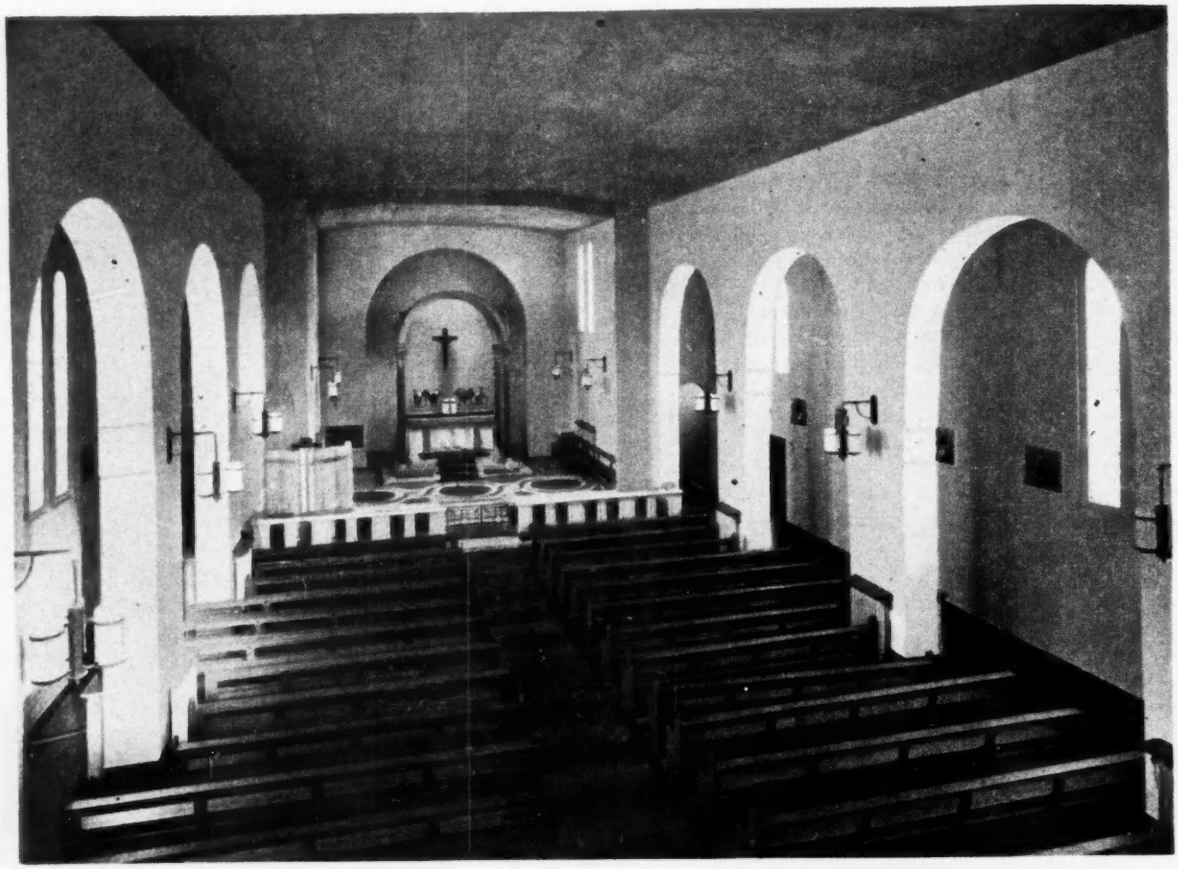
The general contractors were Messrs. G. Duxbury and Sons, of Leicester. Following is a list of sub-contractors:—

Metal casements, Doodson and Bain, Ltd.; steelwork, Henry Smith (Constructional Engineers), Ltd.; heating installation, Wm. Freer, Ltd.; electrical installation, Tarratt Bros., Ltd.; fibreboard suspended ceiling, Beaumonts (Manchester), Ltd.; lightning conductor and gable cross, J. Faulkner and Sons, Ltd.; ironmongery, James Gibbons, Ltd.; leaded lights, Charles Lightfoot, Ltd.; gable crucifix, marble work in communion rail, pulpit, sanctuary steps, altars, etc., J. & H. Patteson, Ltd.; semastic tile flooring and wood block floors, Hollis Bros., Ltd. mosaic floor in sanctuary, L. Oppenheimer, Ltd.; wrought iron rail to baptistery, Duxbury, Hartley and Co., Ltd.; electric lighting fittings, Beaten Metal Co.; and facing bricks, Ibstock Brick and Tile Co., Ltd. (by whose courtesy we reproduce the photograph on page 50).

Detail of west front tower.

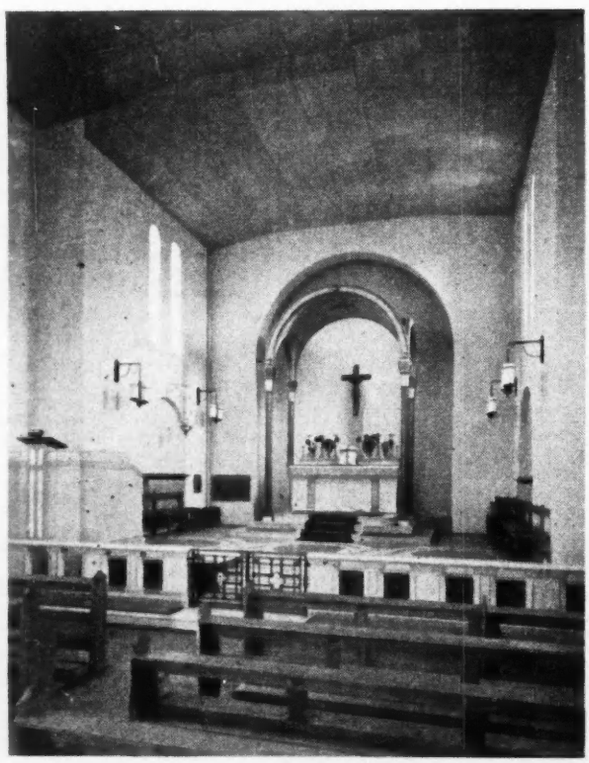


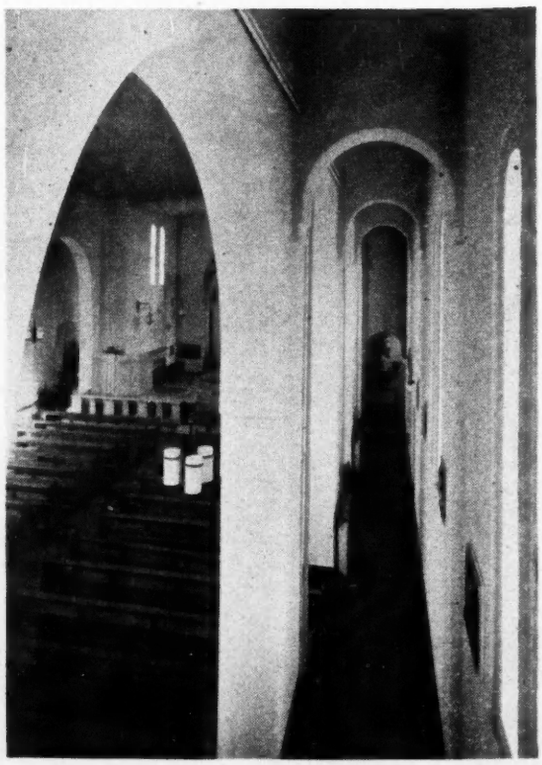
North elevation.

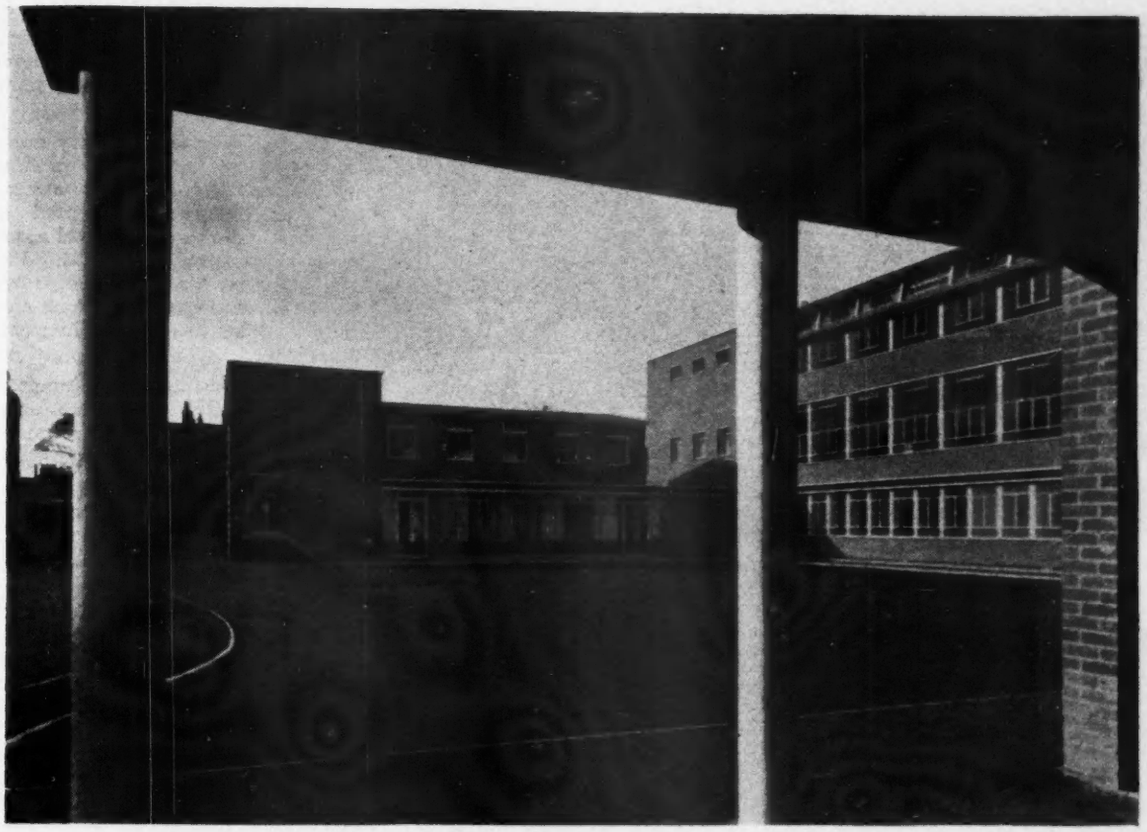


View from the choir gallery. Below left : The sanctuary. Right : South aisle.

CHURCH OF ST. THOMAS MORE, KNIGHTON, LEICESTER







View across the smaller playground to the east side of the assembly hall.

CHURCH OF ENGLAND SECONDARY MODERN SCHOOL, HACKNEY

HOWARD V. LOBB AND PARTNERS, F/ARIBA (HOWARD V. LOBB, CBE, FRIBA, AND F. G. FRIZZELL, ARIBA, AMTPI), ARCHITECTS

THE foundation of this school marks a continuous development in education in Hackney since 1520 when Christopher Urswick, then Rector of Hackney, founded the free school which was first held in Urswick House in the churchyard. The parochial school was founded in 1714 by benefactors of the Parish of St. John and the two schools were united in 1771. They have been the recipients of a number of benefactions and the present school has been principally helped by the munificence of the Manor Charitable Trust, which has provided the main source of the school's reconstruction fund.

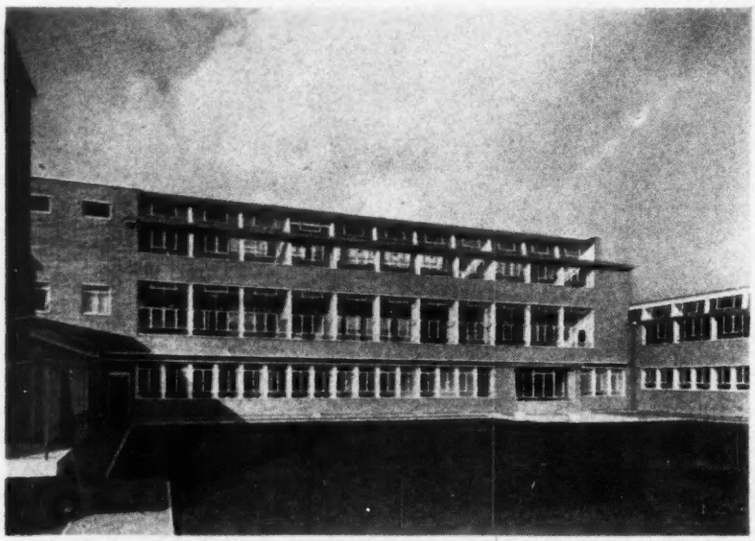
The site is near the centre of Hackney, close to the town hall and library, and occupies the whole of an island except for a row of shops facing Mare-street at the west end. The area of two acres necessitated a three-storey building. The planning was also influenced by the Church requirement that the hall and dining-room block as well as certain practical rooms should be arranged so that they could be available for evening use without giving access to the school proper. The main building runs east to west giving favourable aspects both for the classrooms facing south and for the practical rooms opposite.

The main block has a reinforced concrete frame. The columns were cast *in situ*, designed to minimum sections and precisely formed so as not to need any finishing; the metal windows merely clip between them. The main beams supporting the upper floors are twin prestressed and precast units which support precast inverted T-shaped secondary floor beams. Wood-wool slabs are laid on top of the webs of the T's and act as permanent shuttering for the thin *in situ* concrete topping which is cast in one operation.

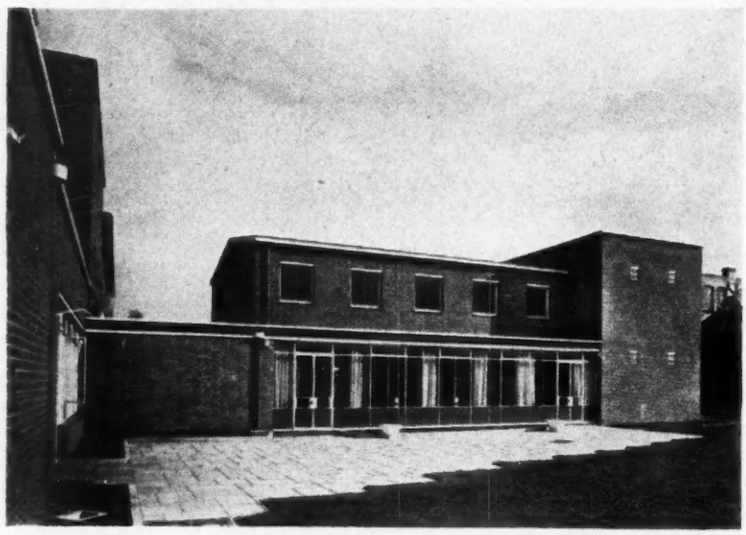
This construction, much of which was completed away from the site, reduces the need for temporary supports to the minimum and because of the voids formed in the floor space, gives a floor of uniform thickness and an unbroken ceiling line without excessive weight. This construction has proved to be very effective in minimising sound transmission through the floors and has in addition a high thermal insulation.

The walls generally are cavity brickwork, the outer skin being hand-made sand-faced multi-colour facings and the interior generally flettons fair faced. The assembly hall, administrative rooms and library are plastered and the kitchen is tiled to door height. The walls of the cloakrooms and lavatories are finished with cement glaze. The assembly hall and gymnasium have hardwood strip floors, the floor of the practical rooms being generally hardwood block and those of the classrooms battleship linoleum. The staircases and lavatories are floored in granolithic and the corridors in asphaltic tiles in which descriptive patterns have been inserted.

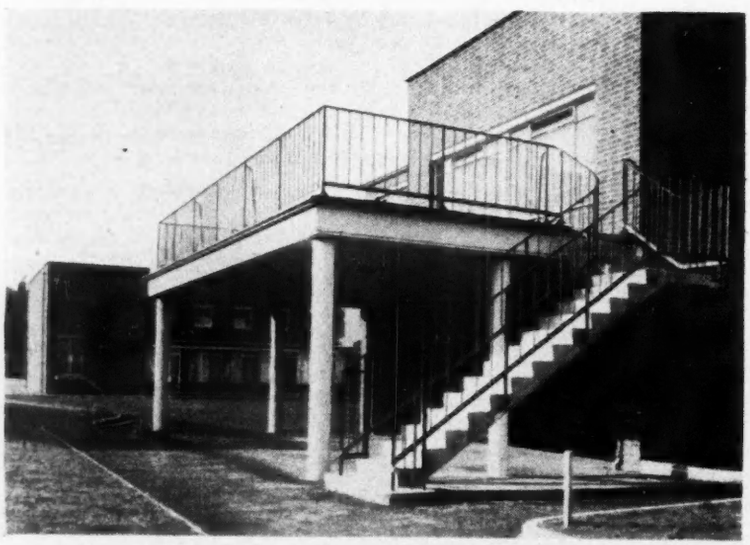
An important feature of the whole building and one which cannot be conveyed in black-and-white illustration is the use of colour. Strong colours are used to emphasise various features such as free-



Main classroom block from the south.



The assembly hall from the west.



Detail of the geography-room terrace looking towards the assembly hall.

standing columns, doors, notice-boards and stair balustrades. These harmonise well with natural-coloured materials such as brickwork, hardwood and bright metal.

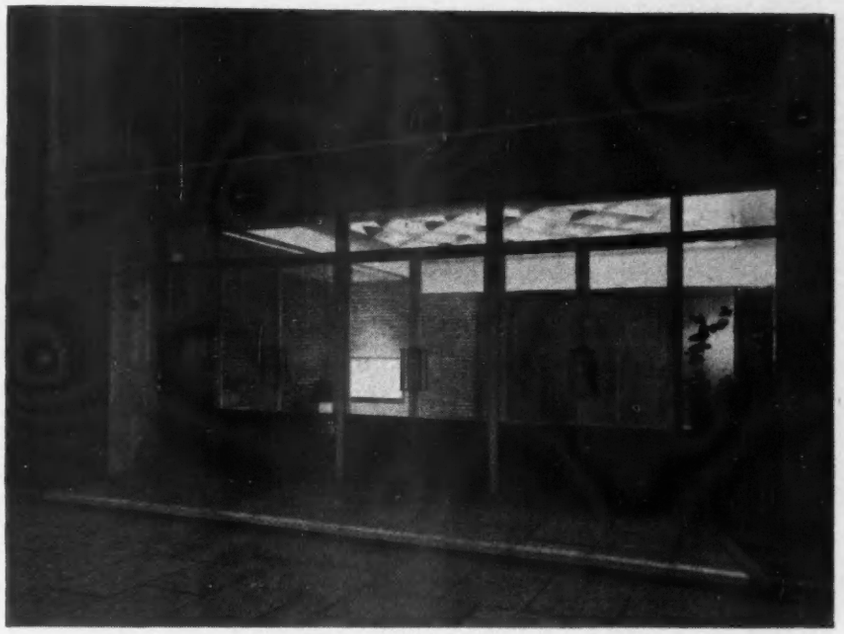
The building is heated by radiators with gas-fired boilers and an accelerated low-pressure system, radiators being supplemented by unit heaters in those practical rooms where wall space is limited. Full use has been made of interior and exterior thermostats and clock controls in order to conserve fuel consumption.

Electric lighting is by tungsten lamps generally, with fluorescent lighting in the needlework room. A simple scheme of landscaping and planting is in hand.

The following impressions of the school have been contributed by the headmaster, Mr. J. A. Ankerson, B.Sc. :

On arrival one is struck by the beauty of line of the building. Clad in red brick, this reinforced and prestressed concrete structure floats lovely and serene above the grimy surroundings of busy industrial Hackney. The vast expanse of glass, the stepped clerestory windows on all three " decks," and its length lead one's thoughts at once to the towering sides of a great ocean-going liner. Later one is not surprised to learn that both architects and builders played prominent parts in the erection of the Festival South Bank Exhibition.

Although, of necessity in London, this school of 340-360 places has to be restricted to a site of two acres and is therefore, perforce, three-storeyed, the arrangement of halls, classrooms, special subject rooms and other features is so well planned that the minimum of circulation by children and staff is sufficient to effect the necessary change-over of lessons every 45 or 90 minutes to accomplish the varied work of a secondary school planned on specialist lines as regards subjects and teachers. So well planned is the building that that bane of every headmaster, time-table lay-out, is considerably reduced in its proportions. This economy in time and movement is effected, broadly speaking, by making each of the three floors serve separate and distinct phases of the activities of the school day. On the ground floor are the three administrative offices, staff common and cloak rooms, the four manual rooms—wood, metal, housecraft, needlework—together with separate assembly and dining-halls, kitchen, gymnasium and children's main cloakroom and lavatory and toilet blocks. The first floor is devoted to four of the six classrooms, the library, geography room and, at the west end, the school-

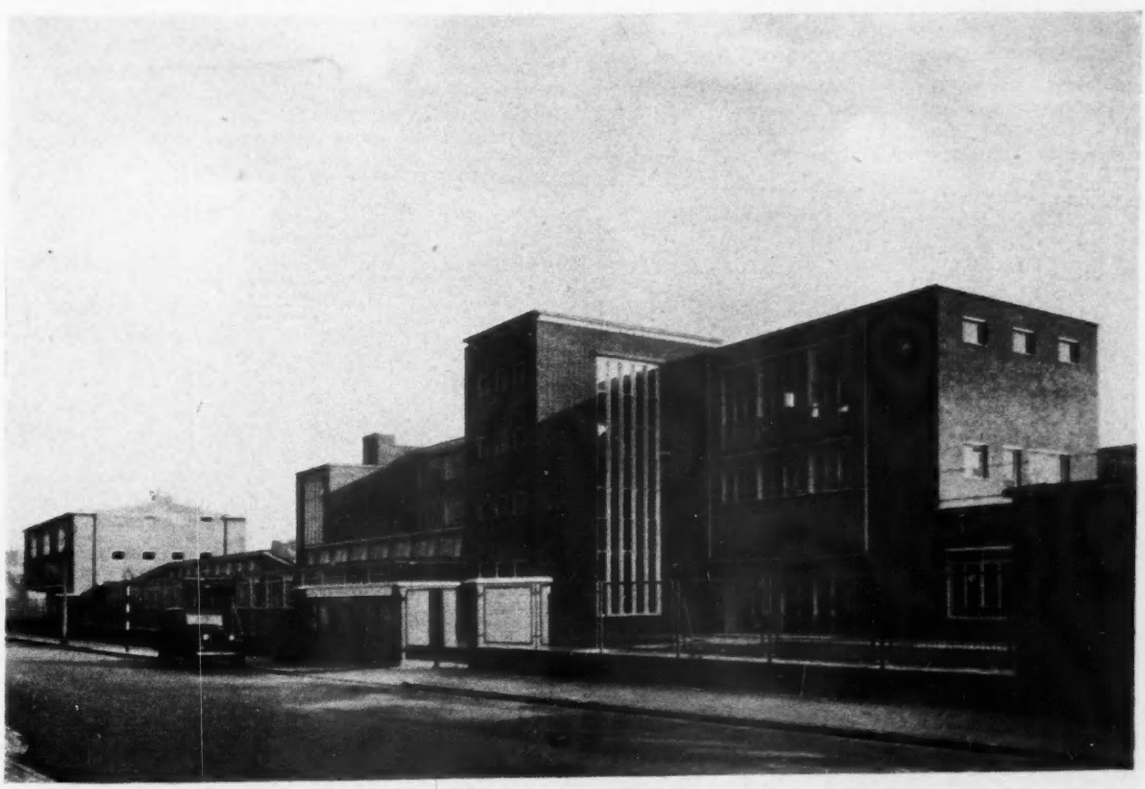


Detail of the main entrance doors; the spotlit foundation stone is on the left-hand side of the entrance hall.

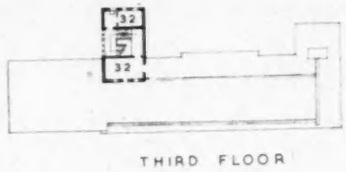
keeper's self-contained flat. On the second floor, or third storey, are the laboratory, the art room and the two remaining classrooms. The three floors which run almost due east and west are connected at each end by a spacious stair block. By placing the library at the centre of the first floor and the laboratory immediately over it at the centre of the second floor, space in both these important rooms has been cleverly increased by eliminating a transverse corridor on each of these two upper floors.

By generous circulation spaces at the end of each floor and abutting on to the staircase landings and by placing a block of three classrooms and the geography room on the first floor, over the ground-floor cloakroom blocks at the east end and flanked by a corridor running north and south, movement on the upper floors is easy and rapid. This is also helped by the width of the main transverse east to west corridor on the ground floor, and of the north to south corridor on the first floor and, in fact, by the general plan of the whole building.

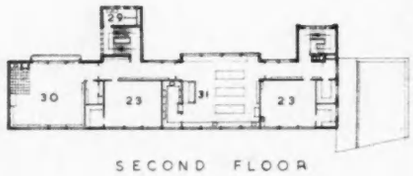
A striking and rare feature in design is that the



General view of the north front facing Paragon-road.



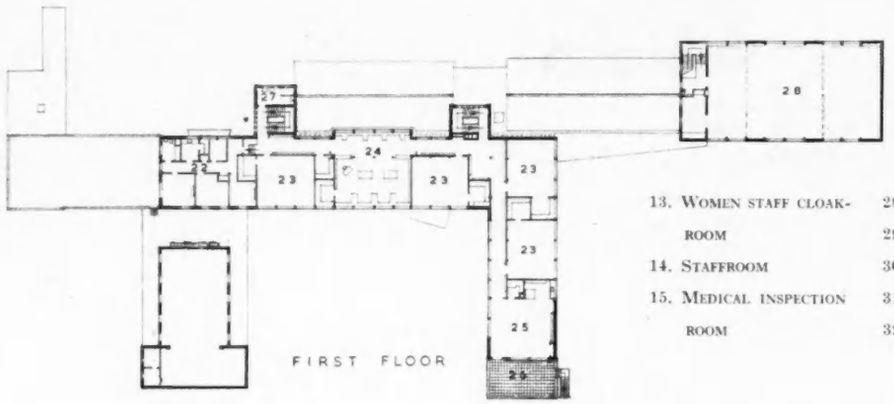
THIRD FLOOR



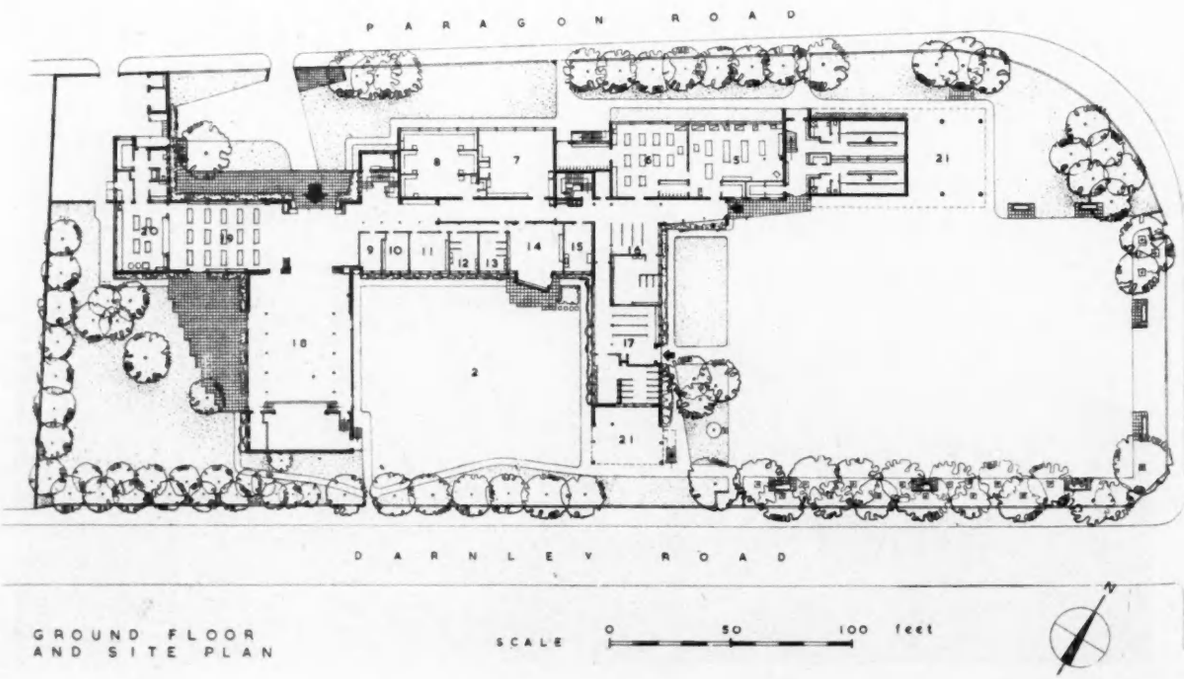
SECOND FLOOR

KEY TO PLANS

1. Main playground
2. Playground
3. Boys' changing room
4. Girls' changing room
5. Metalwork room
6. Woodwork room
7. Needlework room
8. Housecraft room
9. Secretary
10. Senior mistress
11. Headmaster
12. Men staff cloakroom
13. Women staff cloakroom
14. Staffroom
15. Medical inspection room
16. Boys' cloakroom
17. Girls' cloakroom
18. Assembly hall
19. Dining-hall
20. Kitchen
21. Covered play space
22. Schoolkeeper's flat
23. Classroom
24. Library
25. Geography room
26. Observation terrace
27. Boys' lavatory
28. Gymnasium
29. Girls' lavatory
30. Art room
31. Laboratory
32. Tankroom

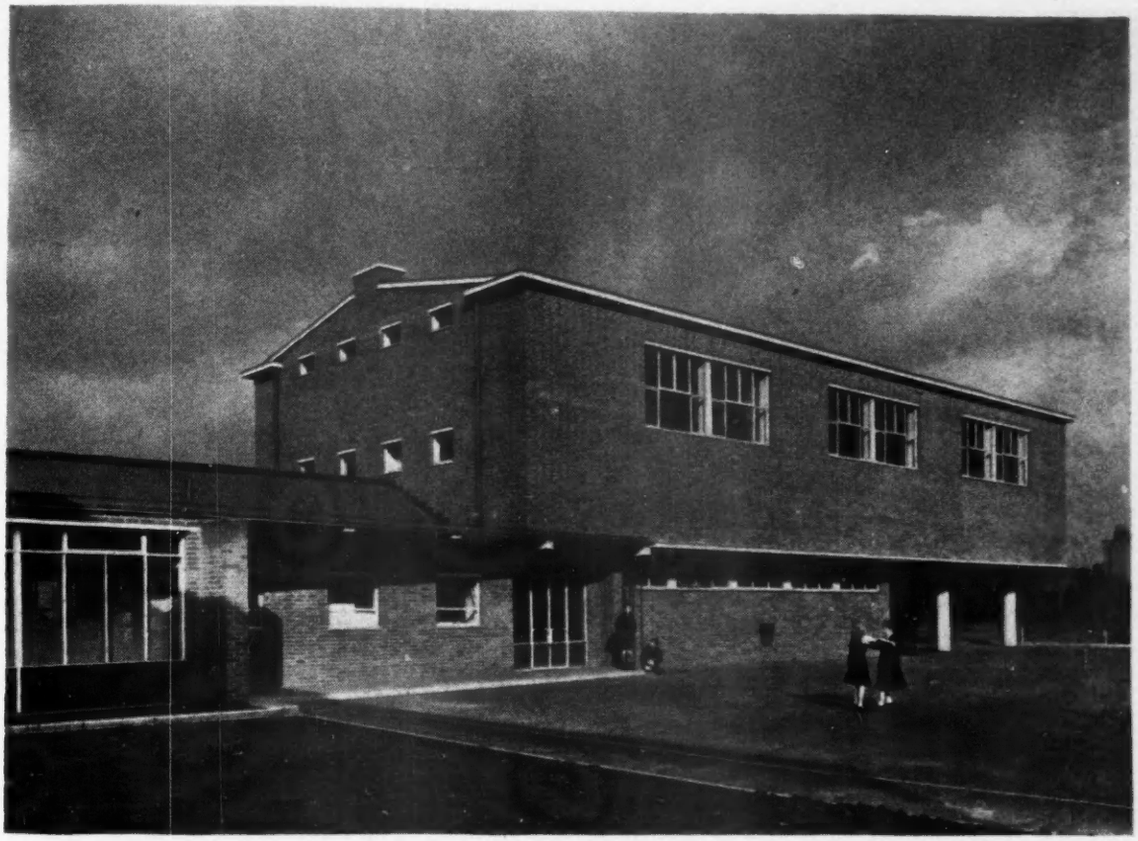


FIRST FLOOR



GROUND FLOOR AND SITE PLAN

SCALE 0 50 100 feet



The gymnasium block, with changing rooms on the ground floor and covered play area at the east end adjacent to the main playground.

offices of the headmaster, senior mistress and secretary, and the staff common room are entirely free from street, playground, school and kitchen noises.

The assembly hall and dining-hall, at the west end of the building, open off the spacious main vestibule by folding doors in mahogany, so that all three can be thrown into one for school receptions and parish evening functions. The centre-piece of any school, particularly a Church school, is its hall. The light and airy hall, holding the full school at assembly or 250 adults seated, is arrestingly distinctive with its nave, pillared aisles, glass sides, clerestory windows, lofty aproned stage, Rhodesian mahogany floor and charming counter-change design proscenium and side curtains. Morning prayers are noticeably improved in devotional quality by these graceful surroundings.

An essential feature of present-day secondary education is dramatic work. Our recent production of a three-scene Nativity play proved the value of the equipment of the stage and such special features of a

Interior of the gymnasium, showing wood-wool ceiling slabs which are left untreated for acoustic purposes, and also act as permanent shuttering for the roof.

Headmaster's room, which faces south.

school stage as the handsome twin-stepped apron, the mechanically wound proscenium curtain, the overhead curtain rails, and the lighting unit, complete with float, batten, dimming switchboard, flood and spotlights.

The magnificent library, panelled and shelved in a variety of home-grown timbers, worked by Gordon Russell, has been provided, at a cost of £2,000, by generous endowment by the Davis Trust of Stepney. The oak reading tables and fitted cherry-wood side-tables hold very comfortably a number as large as 40.

The geography room with its meteorological terrace is exceptionally well equipped with glass-fronted specimen cupboards, sand tray, illuminated map tracing table, large wall boards and map space and is fully equipped for epidiascope and projector work. It has an exceptionally fine window-lighted store room fitted with drawered map-cupboard.

The general science laboratory on the top floor is large and airy. Two specially noteworthy features are the very well equipped preparation room and store, adaptable as a dark room, and a demonstration

The Davis library which has specially designed furniture and fittings.

The entrance hall looking towards the assembly hall and dining-room which are separated from it by sliding folding partitions.

testing beam and pulley tackle capable of supporting loads up to 10 cwt.

The art and craft room on the top floor is exceptionally well lighted on north, south and east sides and will hold 20 double-sided easels, 20 art desks and four or five working tables for fabric printing and other purposes with ease.

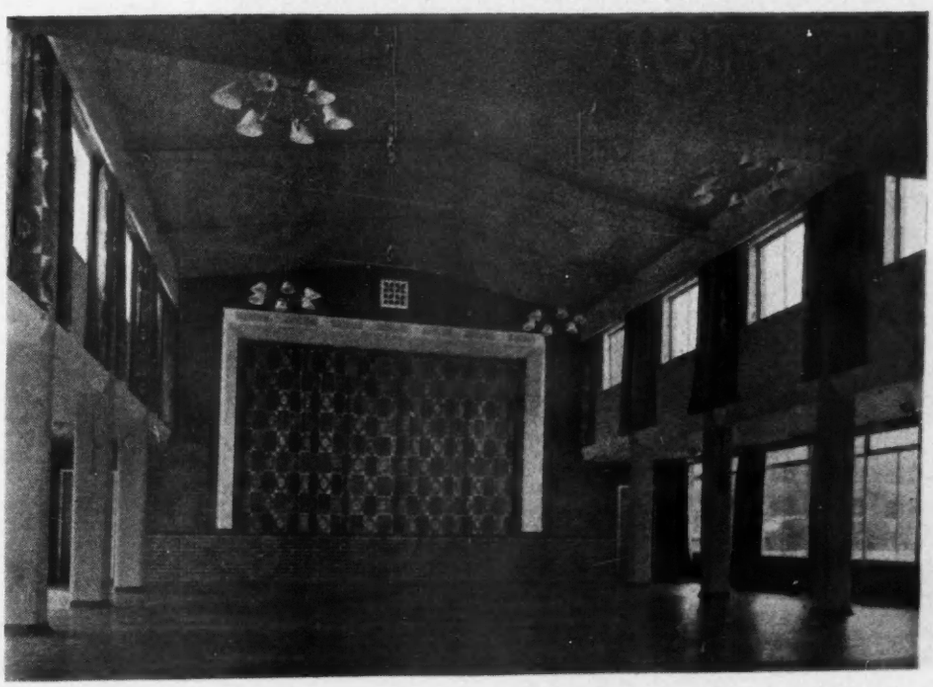
The housecraft room has one novel and very useful feature, it is divided by breast-high tiled partitions into five miniature kitchen-bays each to take four girls.

The classrooms, all lighted on two sides, are noteworthy for their clerestory lighting, large areas of pin-up space and exceptionally large storerooms, opening out of each main classroom. Each has a loud-speaker unit and on the south and east sides are fitted with metal lath venetian blinds.

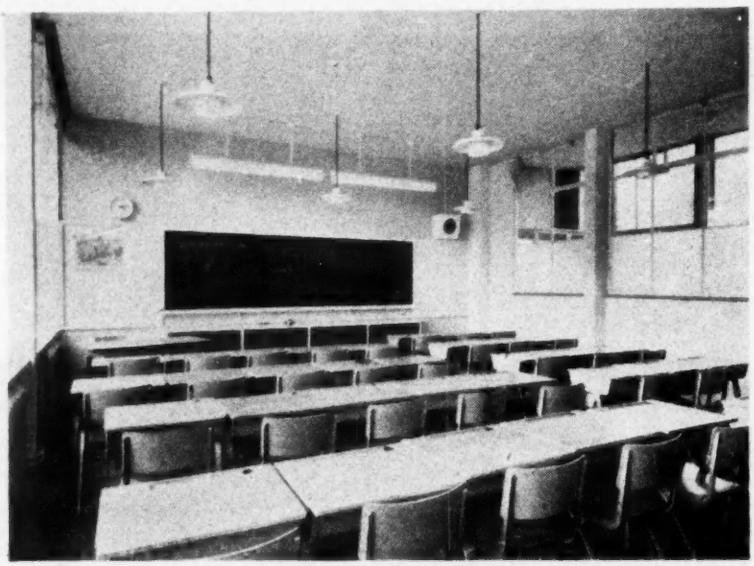
There is a beautifully fitted medical room with curtained divisions for examination and waiting.

The school has one large playground, one smaller playing space, two covered play areas, an open-air acting space, school garden, lawns and treed and grassed surrounds. The outside layout does very much to avoid the old barrack-like aspect of a school.

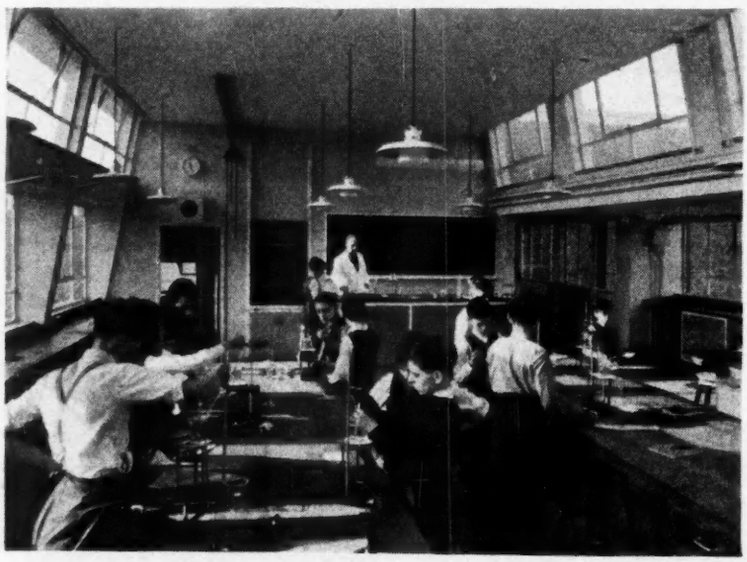
By light and graceful colour contrasts, beautiful decoration and fittings, architects and builders have achieved a striking stimulation to the sense of beauty inherent in all, even the city-dwelling child. At long last the liberal-minded teacher has a real chance of success in his or her efforts to inculcate or to stimulate a sense of beauty in the growing child. Everywhere, even in the charming variety of floor treatment, the eye of the child meets some new aspect



Interior of the assembly hall.



A typical classroom.



The laboratory which is fitted with blinds for darkening purposes and has clerestory lighting on north and south sides.

The housecraft room which faces north, showing clerestory lighting.

of form and colour. It has been remarked that there is a noticeable lift of morale and sense of purpose on the part of both children and staff.

The architect's chief assistant was Mr. A. P. Hodgson, A.R.I.B.A., and junior assistant, Elizabeth Boultbee, Student R.I.B.A. The consulting engineers were: Mr. F. J. Samuely, B.Sc., A.M.I.C.E., M.I. Struct.E., in collaboration with Mr. F. R. Bullen, B.Sc., M.I.C.E., M.I. Struct.E. The quantity surveyors were Messrs. C. E. Ball and Partners. The clerk of works was Mr. H. A. Barford.

The general contractors were Messrs. Holland & Hannen and Cubitts, Ltd. The general foreman was Mr. A. Norman. Following is a list of sub-contractors:

Structural concrete frame, Holland & Hannen and Cubitts, Ltd., Structural Engineering Dept.; structural steelwork, Dorman Long and Co., Ltd.; heating and ventilating installation, Rosser and Russell, Ltd.; electrical installation, Barlow and Young, Ltd.; gas installation, North Thames Gas Board; sanitary plumbing installation, Dent and Hellyer Sanitation, Ltd.; asphalt roofing and tanking, Highways Construction, Ltd.; metal windows and doors, Crittall Manufacturing Co., Ltd.; suspended ceilings, W. H. Colt (London), Ltd., Surbiton, Surrey; acoustic plastering, Meta Mica, Ltd.; cold cement glaze, Robbs Cement Enamel Finishes, Ltd., Dagenham, Essex.

Hardwood floors, Acme Flooring and Paving Co., Ltd., Barking, Essex; asphaltic tile floors, Armstrong Cork Co., Ltd.; terrazzo flooring and w.c. partitions, Marriott and Price; sliding folding partitions, Esavian, Ltd.; library fittings and furnishings, Russell Furnishings, Ltd.; balustrades and railings, S. W. Farmer and Son, Ltd.; aluminium rolling shutters, Shutter Contractors, Ltd., Enfield, Middx.; blinds, Tidmarsh and Sons; fibrous plaster, G. J. Green and Sons; faience, S.G.B. (Dudley), Ltd., Dudley, Worcs.; curtains, Gerald Holtom, Twickenham, Middx.; tubular steel gates and fencing, Light Steelwork (1925), Ltd.; chainlink fencing, Peerless Fences Products, Ltd., Harefield, Middx.; tarmacadam, A. C. W. Hobman and Co., Ltd.; horticultural work, Knowles and Weller, Ltd.

Suppliers.—Facing bricks, Hall and Co., Ltd.; precast concrete, Malcolm Macleod and Co., Ltd.; flush doors, Walter Lawrence and Son, Ltd., Sawbridgeworth, Herts.; sanitary fittings, Dent and Hellyer, Ltd.; cloakroom fittings, Clark Hunt and Co., Ltd., Enfield Middx.; lockers, Kings (B.D.J.), Ltd., Teddington, Middx.; ironmongery, Nettlefold and Moser, Ltd.; garden seats, P. H. Barker and Son, Ltd., Hitchin, Herts; wallpapers, Arthur Sanderson and Sons, Ltd.; foundation stone, Geoffrey Deeley.

CHURCH OF ENGLAND SECONDARY MODERN SCHOOL, HACKNEY

"THE SHIP," MEADVALE, REIGATE

GEORGE LOWE, ARIBA, ARCHITECT

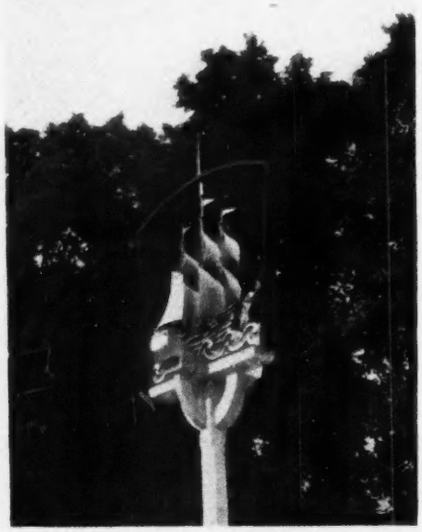
THIS public house at Meadvale, Reigate, has been built to serve the needs of an increased population in that district, which has resulted from the building of a large housing estate by the Reigate Corporation.

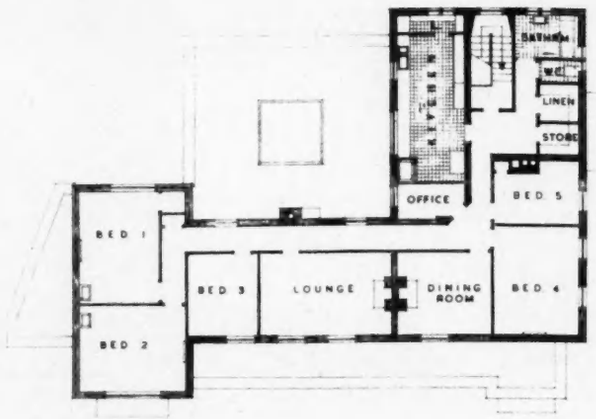
The original "Ship" was opened in June, 1866, as a beer house and since then the business carried on there has been connected with one family. The old "Ship" had a fairly extensive garden and it has been possible to build the new house on the same site and in such a way that the greater portion of the new property could be built without demolition of the old and without interfering with its business.

The excessive slope in the old garden, which fell away from the new road laid by the Corporation, presented some difficulty in planning but this has been overcome by keeping the ground floor up on the front elevation to such a level as to enable the cellars to be built into the natural slope of the ground at the rear.

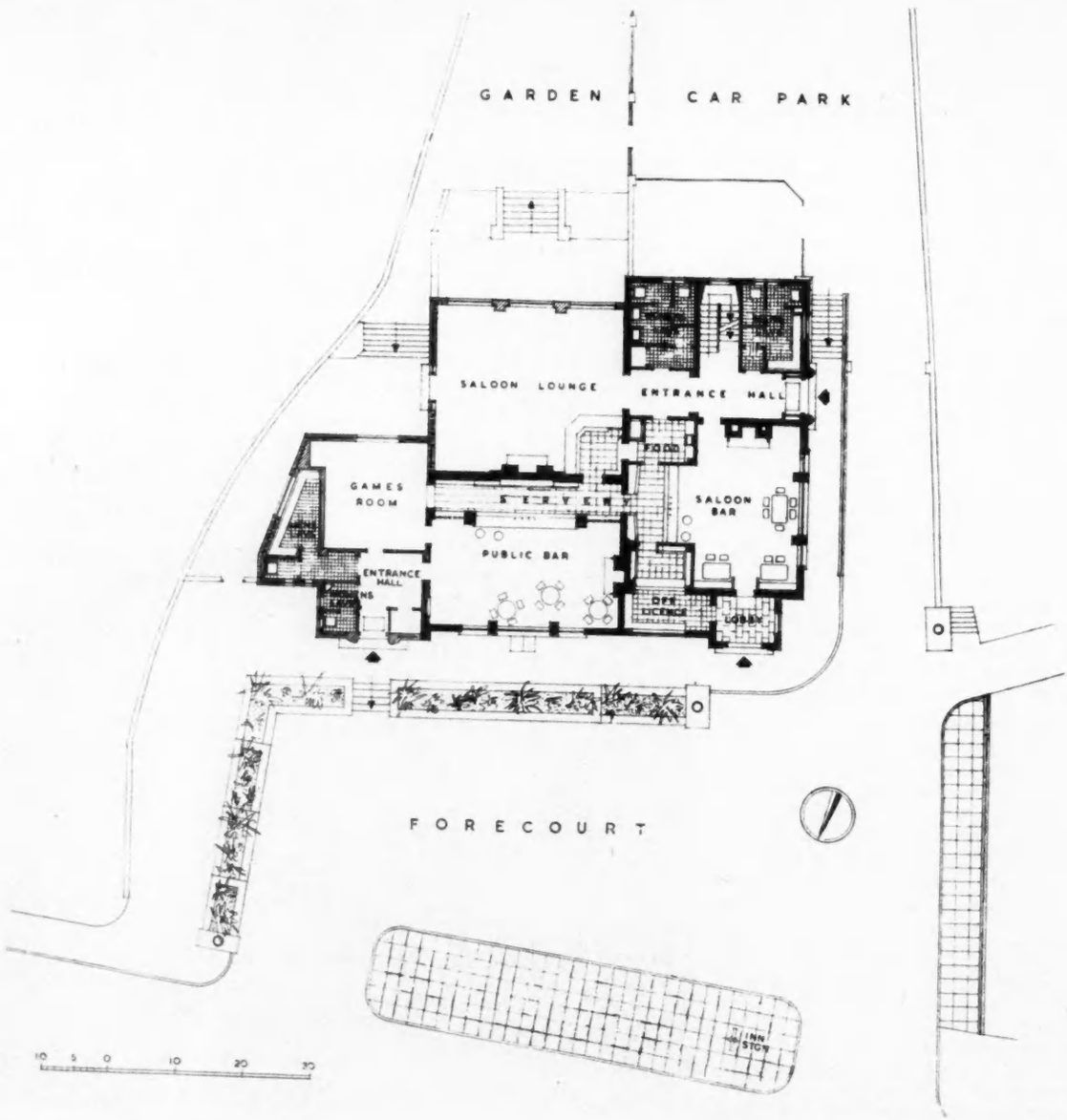
The design is of a simple and straightforward character, there being an entrance hall, saloon bar, public bar, off-licence and cloakroom accommodation for both sexes on the ground floor. An internal servery in which there is a beer hoist and food lift connects both bars and the off-licence. On the first floor provision is made for the housing of the licensee, while in the basement there is a large beer cellar, stores for wines and spirits and boiler room. It is hoped eventually to add lavatories and cloakroom to the public bar, coupled with a new entrance to replace the present temporary structure. There will also be a games room, club room and a lounge.

Entrance to saloon bar.





Left: Inn sign. Above: First-floor plan. Below: Ground-floor plan.



Public bar.

Below: Saloon bar.

The walls are faced externally with hand-made sand-faced bricks from Leicestershire with cills, window and door heads in reconstructed Bath stone. The roof slopes are covered in antique pantiles. Metal windows are fixed in wood surrounds and the external doors are in oak.

The saloon bar, including the counter front, is panelled in oak, finished in two shades. The public bar has a Swedish atmosphere with its walls lined with a simple form of beech boarding. All fitments in the off-licence are in natural oak.

Subdued lighting effects have been obtained internally by the careful choice of fluorescent fittings and externally the building is to be floodlit at night.

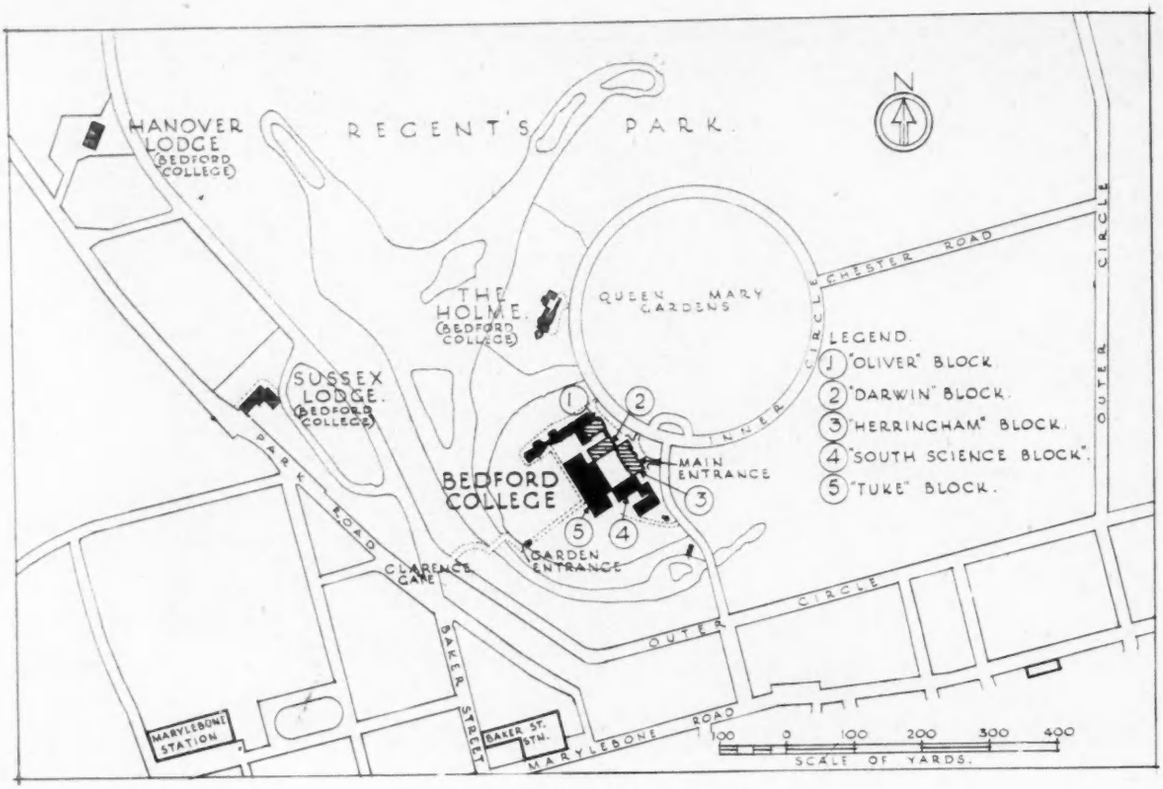
The consulting engineer was Mr. Kenneth Dash, A.M.I.Struct.E., and the quantity surveyor Mr. Kenneth G. Barber, A.R.I.C.S. The general foreman was Mr. Victor Whitmore.

The general contractors were Messrs. Trollope and Colls, Ltd., and following is a list of sub-contractors :—

Chas. Arnold (Isleworth), Ltd., buffstone facing bricks and creasing tiles ; S. and C. Collier, Ltd. red facing bricks ; Comyn Ching and Co. (London), Ltd., door furniture and ironmongery ; Bigwood Bros. (Birmingham), Ltd., metal cellar flaps ; C. E. Welstead, Ltd., metal windows ; Aldous and Campbell, Ltd., crate hoists and electric service lift ; Eonit Engineering Co., structural steelwork ; Hammond and Hussey, Ltd., sanitary fittings ; S. Rogers and Co., Ltd., electrical installation ; Hobdell Engineering Co., Ltd., heating and ventilating ; Shapland and Petter, Ltd., woodwork and furniture ; Horsley Smith and Co. (Hayes), Ltd., Granwood Flooring Co., Ltd., Stevens and Adams, Ltd., flooring.

Kendell's Stone and Paving Co., Ltd., reconstructed stone ; Haskins, roller shutter ; Gaskell and Chambers, Ltd., bar fitting ; Carter and Co. (London), Ltd., faience tiling ; Bratt Colbran, Ltd., fireplaces ; Lenscrete, Ltd., panels to public bar ; Marriott and Price, Ltd., terrazzo ; J. D. C. Summers and Co., Ltd., bronze spraying ; Lettering Centre, lettering and inn sign ; Gent and Co., Ltd., clocks ; A. V. Cook, Marb-l-cote ; Modern Surfaces, Ltd., spray glazing ; Walter Smith (Brasted), Ltd., tarmacadam paving ; Troughton and Young, electrical fittings ; Cromptons, electrical fittings.

"THE SHIP," MEADVALE, REIGATE



Block plan of Bedford College and environs.

THE UNIVERSITY OF LONDON

Bedford College for Women, Regent's Park

MAXWELL AYRTON AND PARTNERS, ARCHITECTS

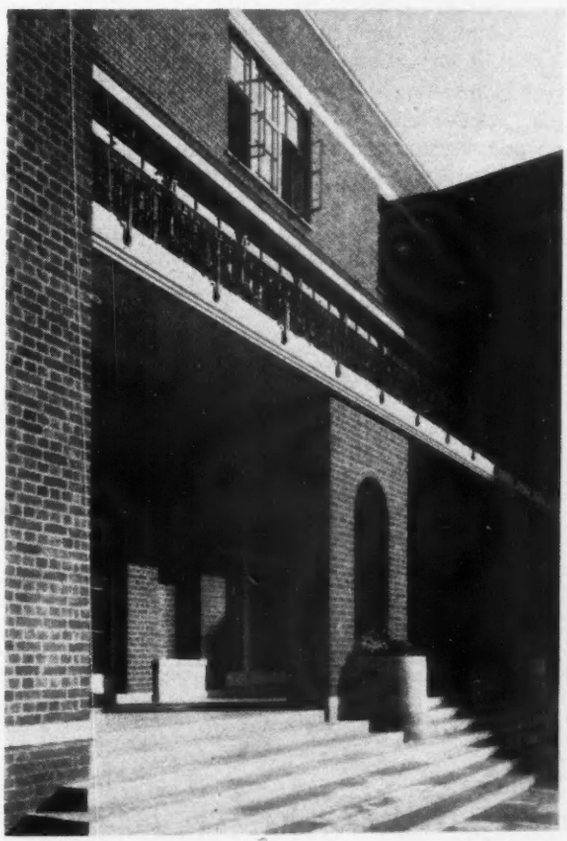
THIS descriptive note accompanying the illustrations (writes Mr. Maxwell Ayrton, F.R.I.B.A.) gives me the opportunity to record that the work described was not, nor could possibly be, that of one man but is definitely the result of combined effort on the part of the consultants, the general contractors and sub-contractors mentioned—and Mr. F. Taylor, the clerk of works. From the commencement, in spite of the difficulties of the period both in labour and materials, it was determined that the quality of the works throughout should be the highest pre-war standard in workmanship and materials.

It is pleasant to record that this was accomplished in every branch, everyone working together to that end with only one thought—that of the job as a whole—and was accomplished with rare harmony and happiness, a spirit largely born from that of the College authorities and staff, all of whom never failed to express interest and appreciation of the works as they proceeded. Too few clients realise how great and beneficial an effect this has on the atmosphere created.

The " Ladies College " opened in Bedford-square in 1849 and later changed its name to Bedford College for Women. In 1909 the College acquired from the Crown the lease of South Villa, a private house standing in nine acres of grounds on the edge of the lake in Regent's Park, upon condition of the lease that the strip adjoining the lake should be relinquished to the Crown to form a public walk. The removal of the College to Regent's Park took place in 1913, upon completion of the buildings by the late Basil Champneys.

In 1919, upon appointment as architect to the College, plans were prepared by the writer for the completion of the quadrangle, and South Villa was demolished to make this possible on condition that the superficial area should not exceed that of South Villa and the height of the building be as laid down by agreement with the Crown. This building, known as Tuke Building in honour of Dame Margaret Tuke, Principal from 1907 to 1929, was opened in 1931, and forms the west side of the present quadrangle. The first sketch designs were for a building faced with Portland stone, but it was realised that this could not harmonise with the red brick and terra cotta buildings of Basil Champneys.

The destruction in 1941 of the administrative block, (now called " Herringham ") the north science block (now called " Darwin ") and the dining-hall and kitchens (called " Oliver ") left an interesting problem in planning, as it was insisted that in replacement of



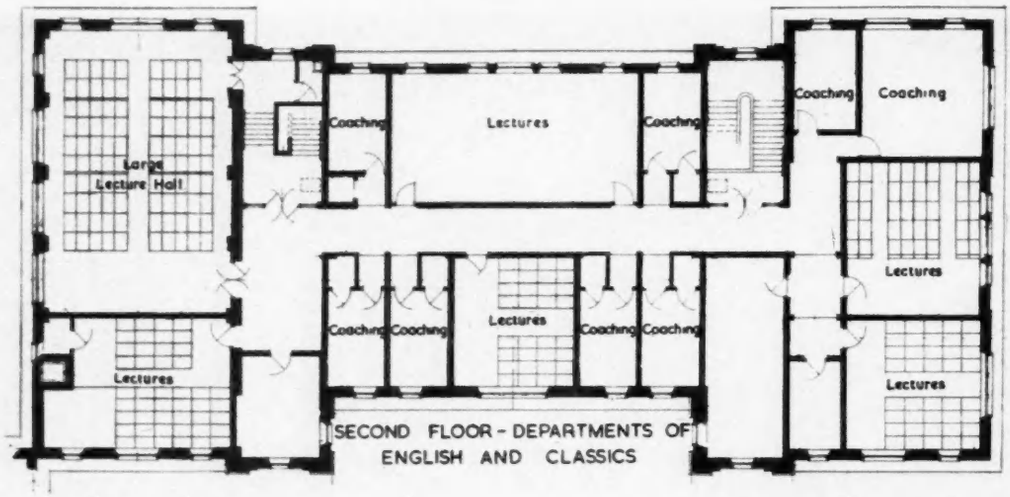
Above : The Herringham block, from south.

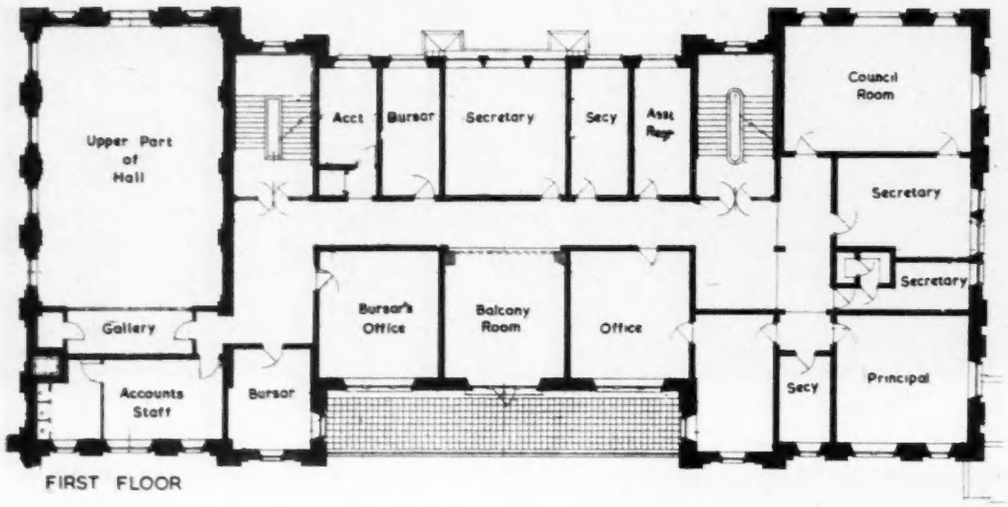
Left : Detail of south entrance.

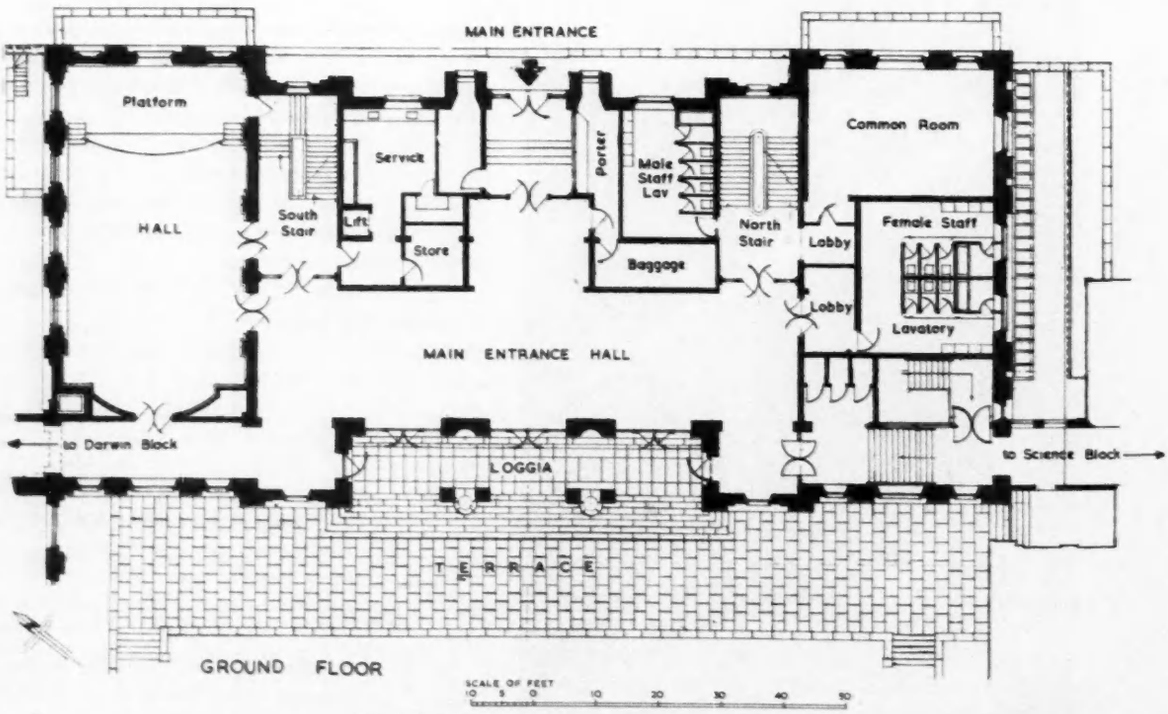
these buildings they should be kept entirely within the perimeter of the buildings destroyed. At the same time a much greater floor area was required ; this was happily rendered possible by the fact that the floor heights were much greater than is now desirable and additional floors were able to be arranged, one in each case. This required some ingenuity in preserving access throughout without going out-of-doors.

On the night of May 10, 1941, the exceptionally low tide was undoubtedly reckoned upon by the enemy, with the result that the Fire Brigade was greatly handicapped and it was many hours before help could be given to the College. The fire was started by a high-explosive bomb, followed by a shower of fire bombs in the portion connecting " Oliver " with " Darwin." The fire was got under control by the B.B.C. defence officers and members of the College staff, but the wind changed, and fire breaking out again spread over " Oliver," " Darwin " and " Herringham," bringing about complete destruction.

Wisely, the College Council gave instructions for all plans to be prepared immediately and carried through to contract drawing stage, with all details and arrange-





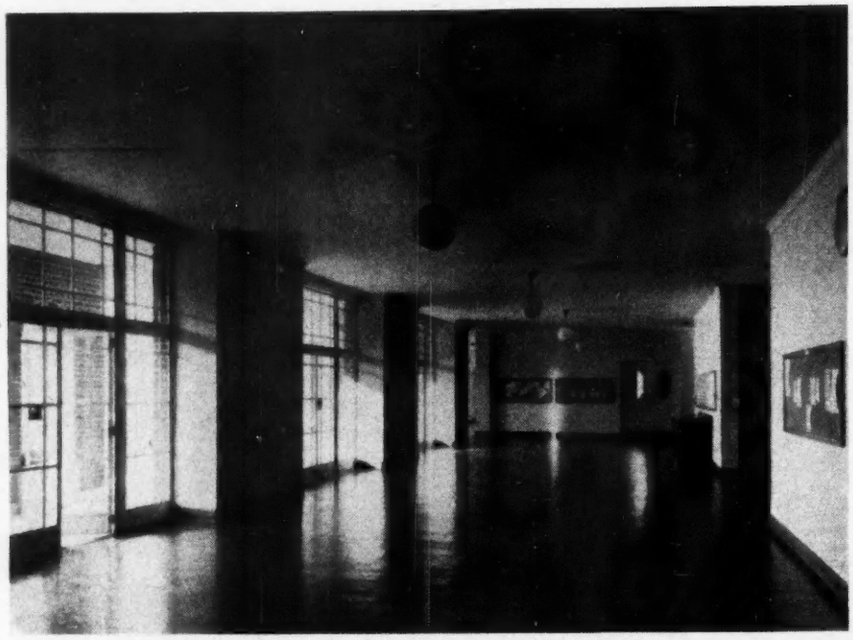


HERRINGHAM BLOCK: Plans.

The Herringham block, from the north. Below : Detail of north (main) entrance.

ments made for an immediate start as and when licences could be granted. This enabled the new "Oliver," including the dining-hall and tutorial rooms on the floor above, to be begun in April, 1947, and completed in February, 1949. "Herringham," which is chiefly administrative, was commenced in May, 1948, and completed in April, 1951. "Darwin" was commenced in May, 1950, and completed in July, 1952; this block comprises mainly teaching and research laboratories and lecture rooms. These buildings were formally opened by H.R.H. Princess Alice, Countess of Athlone, and the Earl of Athlone, Chancellor of London University, on October 28 last.

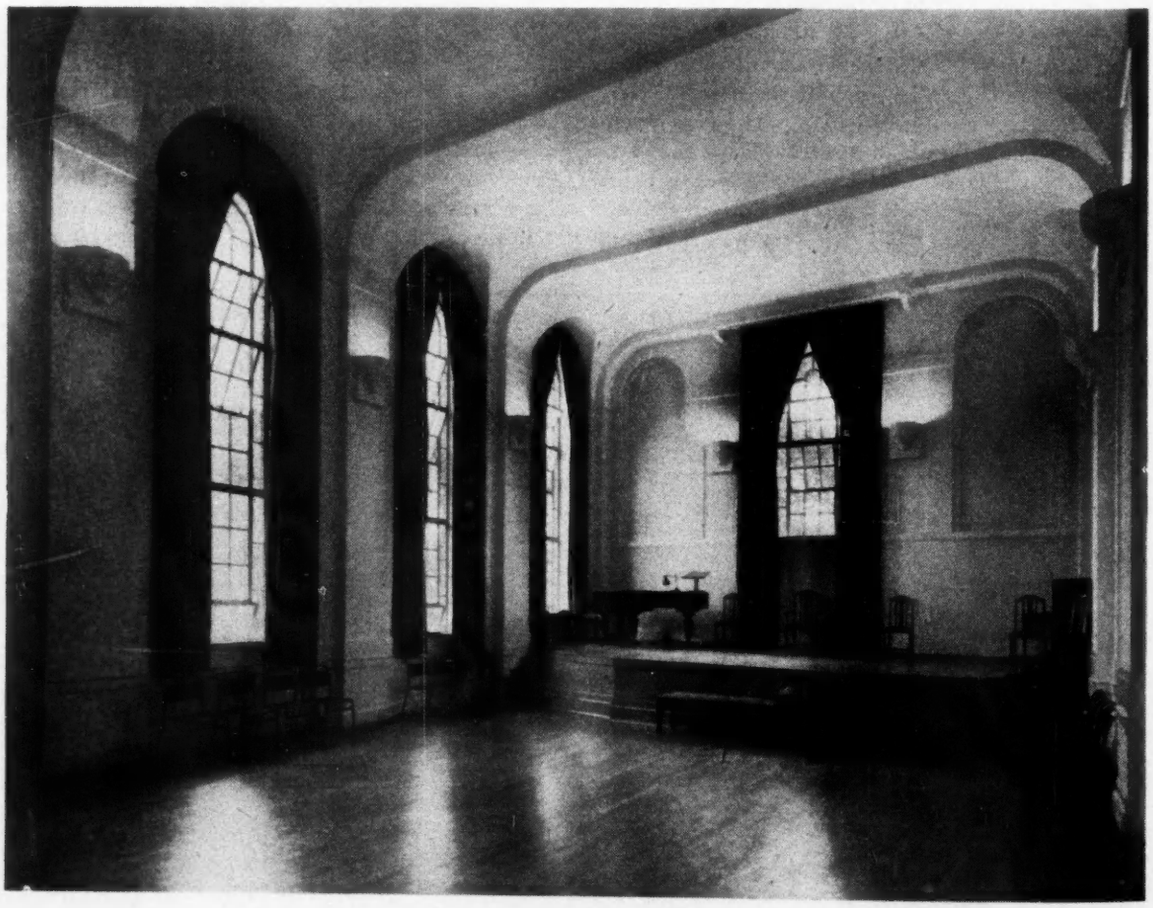
In view of the remaining Basil Champneys buildings



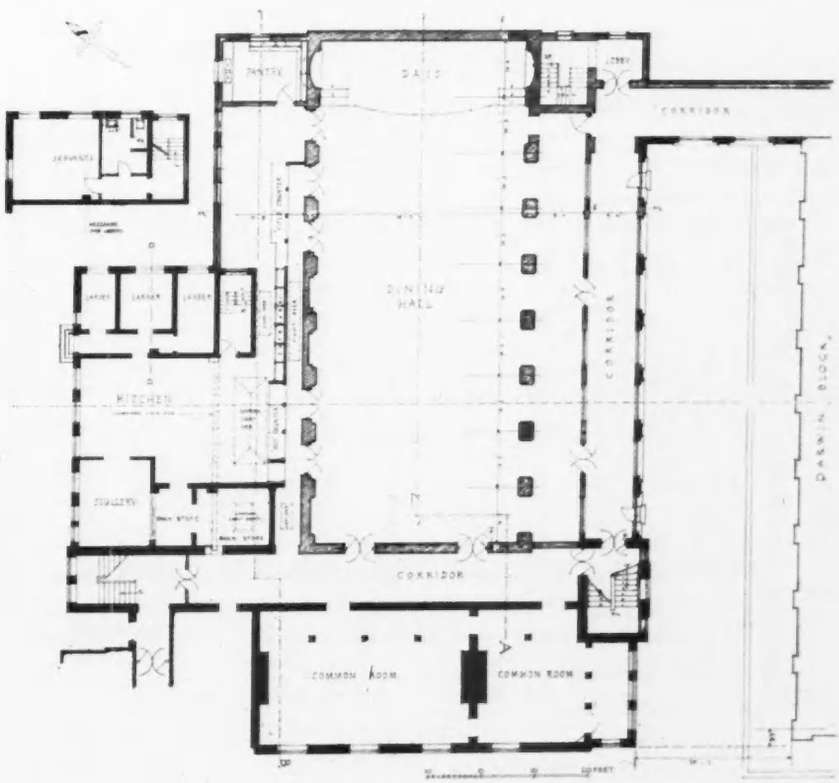
Left : The south entrance foyer, Herringham block.

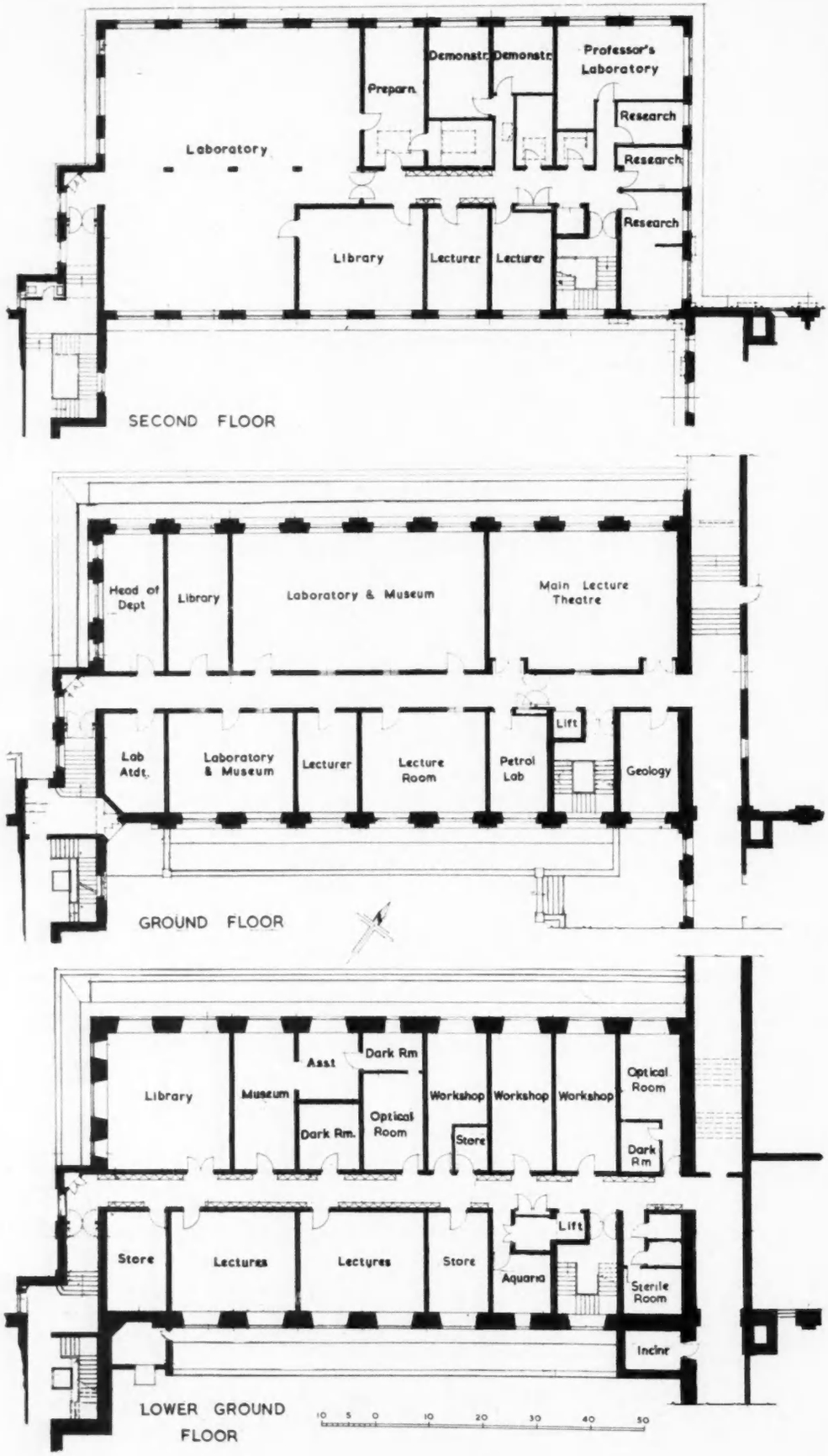
Below : The assembly hall, Herringham block.

being in red brick and terra cotta, brick was obviously the right treatment—a simple, straightforward design giving ample light and through ventilation. The whole of the heating and hot-water services are from one main boiler-house, these being oil-firing only—no coal or open fires. The dining-hall in "Oliver" is floored with Garibou, an African hardwood laid in strips; the upper floors of this building are covered with cork, a material also used for the general flooring in "Herringham," where the cloakrooms are in Granwood. In "Darwin" the floors are laid in Rhodesian teak block. The laboratory bench tops are of teak, and the underbench furniture, specimen cases, etc., are of Lagos mahogany. Lighting in "Oliver" and "Her-



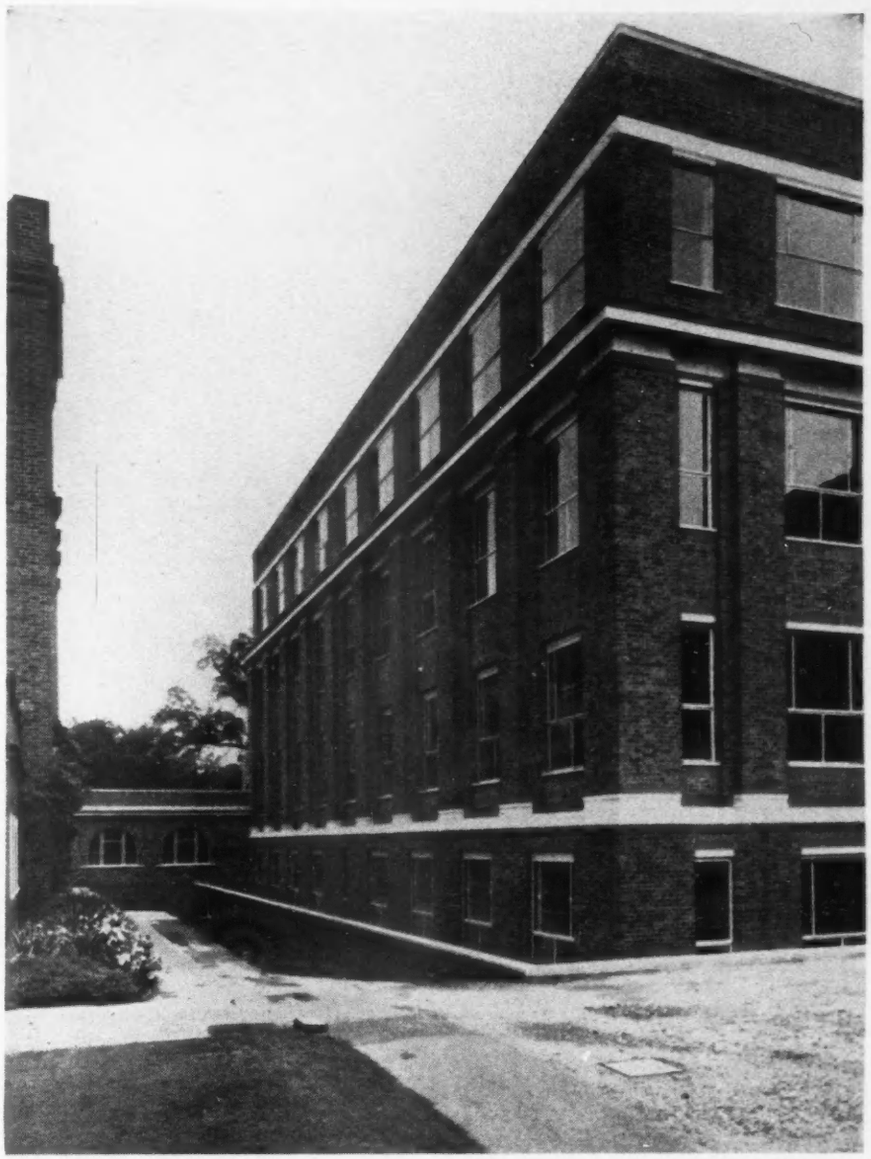
The dining-hall, the Oliver block. Below : Plan of the Oliver block.





DARWIN BLOCK: Plans.

BEDFORD COLLEGE FOR WOMEN, REGENT'S PARK



The Darwin block, from the west.

ringham " is by tungsten lamps ; in " Darwin " by tungsten and fluorescent to suit special requirements.

The works have been ascribed to the writer personally as the plans and contract were settled before the present partnership was formed. During the operations I need hardly say that my partners, Mr. J. A. Lynch and Mr. Courtenay Theobald, have been intimately connected with me in the ultimate result now described.

The quantity surveyors were Messrs. A. R. Mais and Partners, and the general contractors Messrs. Trollope and Colls, Ltd., 41/44, Great Queen-street, W.C.2, who were also responsible for the excavation (part), foundations, reinforced concrete, plumbing, plastering, joinery and stone work. The clerk of works was Mr. F. Taylor, and the general foreman first, Mr. R. Addison, then the late Mr. J. Morley, and latterly, Mr. J. A. G. Smith.

Consultants were : Constructional engineers : Messrs. Considère Constructions, Ltd. ; drainage and plumbing : Messrs. Rogers Field and Bean ; heating and ventilation : Mr. Vernon Hardy ; and electric lighting and service, Mr. W. F. Parker.

Sub-contractors and suppliers were : Demolition, E. W. Spears and Co., Ltd. ; excavation (other than by general contractors), Willment Bros., Ltd. ; dampcourses, " Aqualite," by Wm. Briggs and Sons, Ltd. ; bricks, S. and E. Collier, Ltd., and Daneshill Brick and Tile Co. ; stone, Wandsworth Stonemasonry Works, and South Western Stone Co., Ltd. ; special roofing, Paropa, by Frazzi, Ltd. ; glass, James Clark and Eaton, Ltd. ; patent glazing, Luxfer, Ltd., R. Seddon and Sons (St. Helens), Ltd., and James Clark and Eaton, Ltd. ; woodblock flooring, Acme Flooring and Paving Co. (1904), Ltd., and Hollis Bros., Ltd. ; oak flooring, Calders, Ltd. ; cork flooring, Armstrong Cork Co., Ltd., and Cork Insulation and Asbestos Co., Ltd. ; Granwood flooring, Granwood Flooring Co., Ltd.

Central heating, Troughton and Young (Heating), Ltd., and Richard Crittall and Co., Ltd. ; gas fixtures, gas fittings, boilers and ventilation, Troughton and Young (Heating), Ltd. ; electric wiring, electric light fixtures and electric heating, Troughton and Young, Ltd. ; sanitary fittings, Shanks and Co., Ltd., and W. N. Froy and Sons, Ltd. ; stair-treads, Ferrodo nosings supplied by Cork Insulation and Asbestos Co., Ltd. ; door furniture, Stedall and Co., Ltd. ; door furniture, Nettlefold and Moser, Ltd. ; casements and window furniture, Henry Hope and Sons, Ltd. ; bells and telephones, Troughton and Young, Ltd. ; iron staircases, C. Hall (Metalworks), Ltd.

Sunblinds, J. Avery and Co. ; metalwork, C. Hall (Metalworks), Ltd. ; underbench furniture and showcases, Kerridge (Cambridge), Ltd. ; slate cills, Stirling and Johnson ; tiling, Carter and Co. (London), Ltd., and W. B. Simpson and Sons, Ltd. ; lifts, Waygood-Otis, Ltd. ; water softening plant, Troughton and Young (Heating), Ltd. ; roads; Highways Construction, Ltd. ; roof ladders, H. C. Slingsby, Ltd.; paint and distemper, Screeton Paintmaker and Leyland Paint and Varnish Co., Ltd. ; and acoustic tiling, Newalls Insulation Co., Ltd.

View of Montgomery House from the south-west.

"MONTGOMERY HOUSE"

THE MANCHESTER YMCA WAR MEMORIAL

HARRY S. FAIRHURST AND SON, FRIBA, ARCHITECTS

MONTGOMERY HOUSE is sited on the Alexandra Park Playing Fields which are owned by the Y.W.C.A., and on which is also built a new pavilion. The hostel gives accommodation for 128 men in single study bedrooms, each of which measures 12 ft. by 9 ft. They are comfortably furnished and are supplied with hot and cold water. Other accommodation includes a general study, a spacious lounge, games and social rooms. There is a dining-room where residents not only have their own meals, but can entertain friends. In the chapel will be placed the memorial book of names of those in whose memory many of the bedrooms have been given.

The plans provide public rooms and kitchen over the whole of the ground floor with the study on the first floor, and bedrooms on double-banked corridors fill the remainder of the building. The bedrooms have specially selected furniture and on the corridor wall of each is a lavatory basin with hot and cold water, the supply and waste pipes being in vertical ducts, of which there is one to each pair of rooms, collected together in the horizontal duct in the basement.

The central feature, which is faced in Portland stone, houses the main staircase and passenger lift. A green-slated mansard roof accommodates the tanks and lift machinery and from it access is gained to the flat roofs of the wings.

The building is basically constructed of load-bearing external walls with a steel spine and steel beams. Hollow-tiled floors are used throughout in which are embedded the electrical conduits. The V-shape of the building allows sun to reach all rooms at some time of the day for most of the year. The external finishes are Himley hand-made sand-faced bricks with artificial stone cill courses, heads and copings. Metal windows are in wood frames.

The joinery of the main rooms on the ground floor is in natural oak, wax polished. Floors generally are of hardwood blocks in rooms and cork in corridors.

The material used in the ground floor and study is missanda and in the bed-sitting-rooms beech blocks. Internal partitions are of hollow clay blocks and are plastered. Heating is by a low-pressure hot-water system serving radiators, with coke-burning boilers fed by automatic stokers.

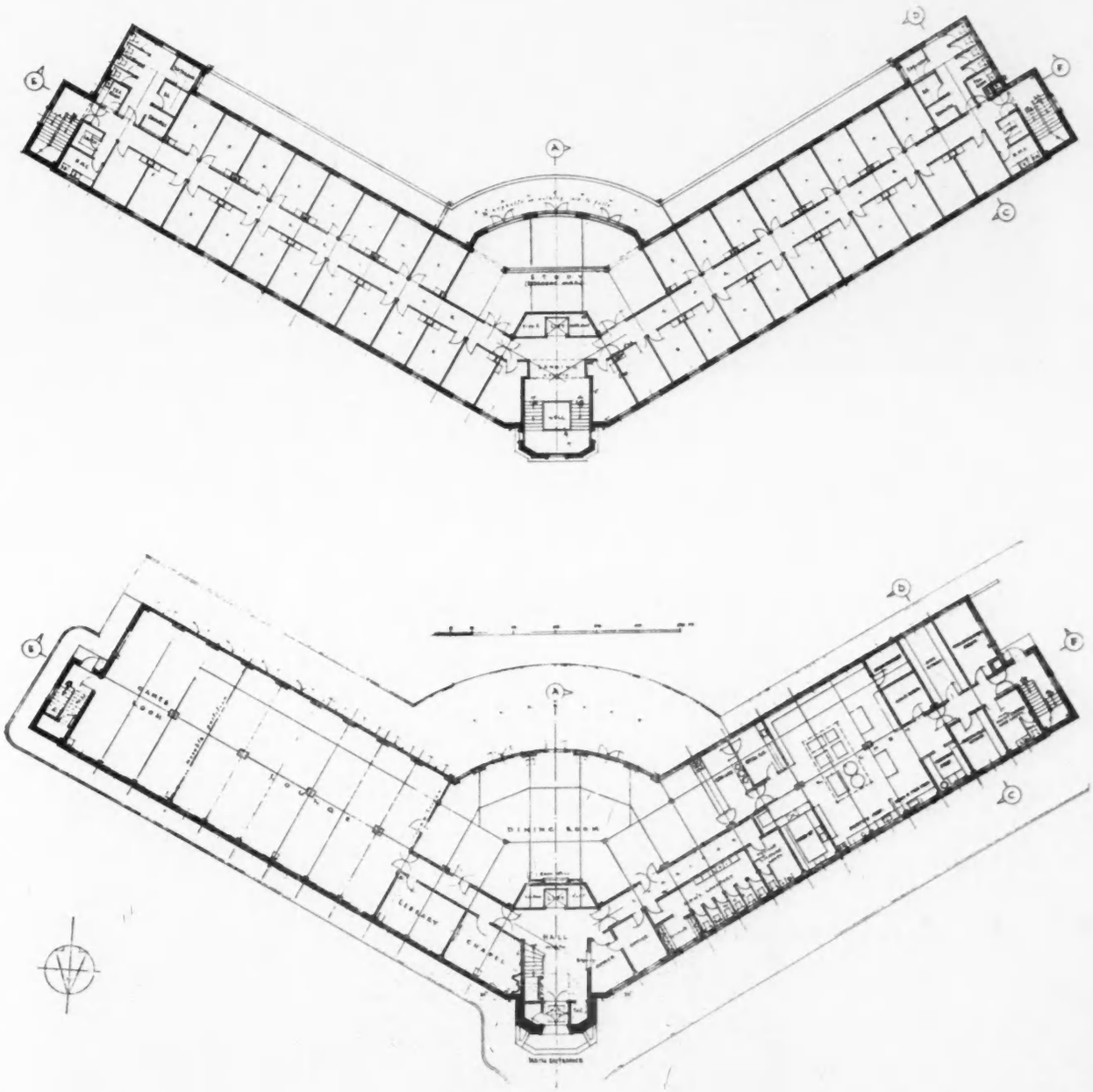
The cost of the scheme, including furnishings, was £140,000.

Messrs. Harry S. Fairhurst and Son, F.R.I.B.A., were the architects and Mr. William G. Wood, A.I.A.S., the quantity surveyor.

The general contractors were Messrs. J. Gerrard and Sons, Ltd., of Swinton, Manchester. Following is a list of the sub-contractors engaged on the scheme :

Steelwork, Banister Walton and Co., Ltd. ; heating installation, Robert Heyworth and Co., Ltd. ; electrical installation, F. S. Boucher and Co. ; lift, Waygood Otis, Ltd. ; lightning conductor, J. Faulkner and Sons, Ltd. ; facing bricks, Himley Brick Co., Ltd. ; Portland stone, Bath and Portland Stone Firms, Ltd. ; artificial stonework, Empire Stone Co., Ltd. ; windows, Henry Hope and Sons, Ltd. ; decorating, W. Winstanley & Co., Ltd.

Plastering, W. J. Roberts and Son, Ltd. ; wall tiling and terrazzo, A. Quiligotti and Co., Ltd. ; floor tiling, S. Mylchreest and Co. ; waterproof rendering, W. J. Harries, Ltd. ; asphalting, Limmer and Trinidad Lake Asphalte Co., Ltd., Manchester ; staircase balustrading, Duxbury Hartley and Co., Ltd. ; sanitary goods, Morrison Ingram and Co., Ltd. ; ironmongery, Laidlaw and Thomson, Ltd. ; wood block flooring, Hollis Bros., Ltd. ; cork tile flooring, Armstrong Cork Co., Ltd. ; canteen equipment, James Stott and Co., Ltd. ; stone carving, Bond and Hall ; dining-room memorial, J. and H. Patteson, Ltd. ; fire extinguishers, Mather and Platt, Ltd. ; roof lights, Alex. Lees, Ltd. ; furniture, Lewis's, Ltd., Manchester ; flue bricks, Moler Products, Ltd. ; drain pump, Pulsometer Engineering Co., Ltd.

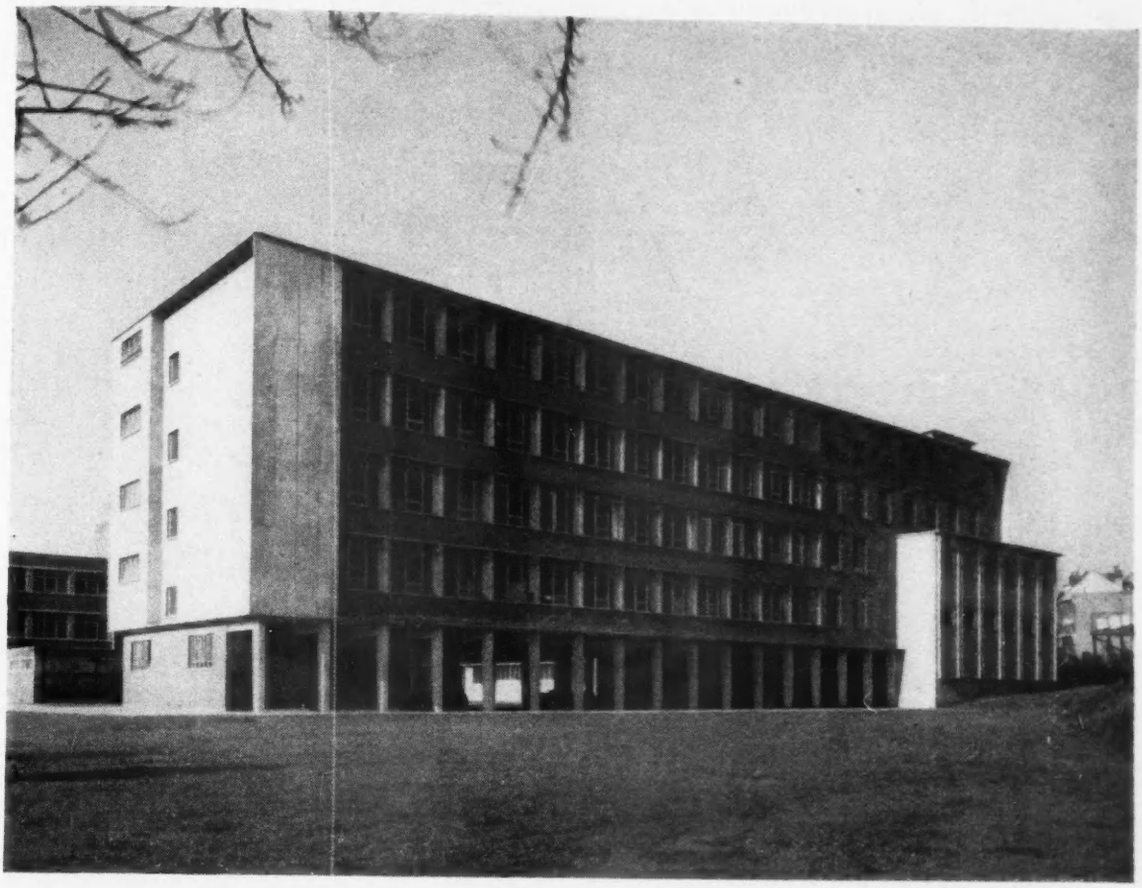


Ground- and first-floor plans.

North elevation.

"MONTGOMERY HOUSE" : MANCHESTER YMCA WAR MEMORIAL

The lounge.



Elevation to Dudden Hill, from the south-east.

EXTENSION TO WILLESDEN TECHNICAL COLLEGE

for Middlesex County Council Education Committee

C. G. STILLMAN, FRIBA, COUNTY ARCHITECT

AREA ARCHITECT : D. R. DUNCAN, OBE, ARIBA. SENIOR ARCHITECT : J. F. PATERSON, ARIBA

THE site of this extension to the Technical College is at the junction of Dudden Hill-lane and Denzil-road. Dudden Hill-lane is scheduled for widening in the future and the design was developed to retain as much free ground space as possible on the limited site. The contract was commenced in March, 1950, and completed in September last, the cost being approximately £200,000.

Accommodation : The accommodation provided comprises :

(1) Chemistry, physics, metrology, microscopy and heat engines laboratories.

(2) Classrooms and drawing offices.

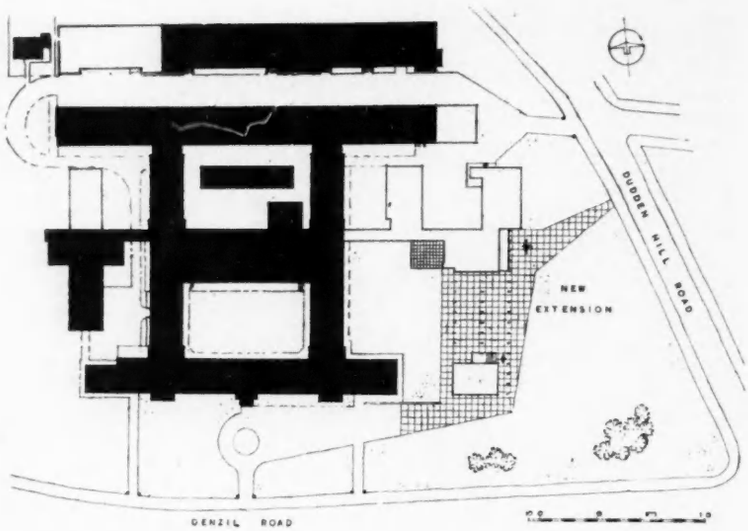
(3) Lecture hall, students' dining-room, staff room, governors' room.

(4) Central boiler house and ancillary rooms.

This accommodation which is provided on five floors, is served by two passenger lifts and service lifts.

Construction : The building is a reinforced concrete-framed structure with brick and concrete slab panel filling. The frame was designed to standardise the size of members as far as possible to assist speed of erection and to achieve economy. The first-floor slab was designed to take a superimposed load of 200 lb. per sq. ft. to enable heavy machinery to be installed at a later date if this should be required. The heat engines laboratory has a suspended floor insulated from the machine bases which stand upon a main ground slab, the space between acting as a service duct to allow maximum flexibility of layout.

Services : The boiler house is designed to supply heat and hot water by means of automatically stoked boilers for both new and existing college buildings, and has a heating output of 6,387,000 B.T.U.s per hour. All services are accommodated in two main



Block plan. That portion blacked-in represents the original part of the college.

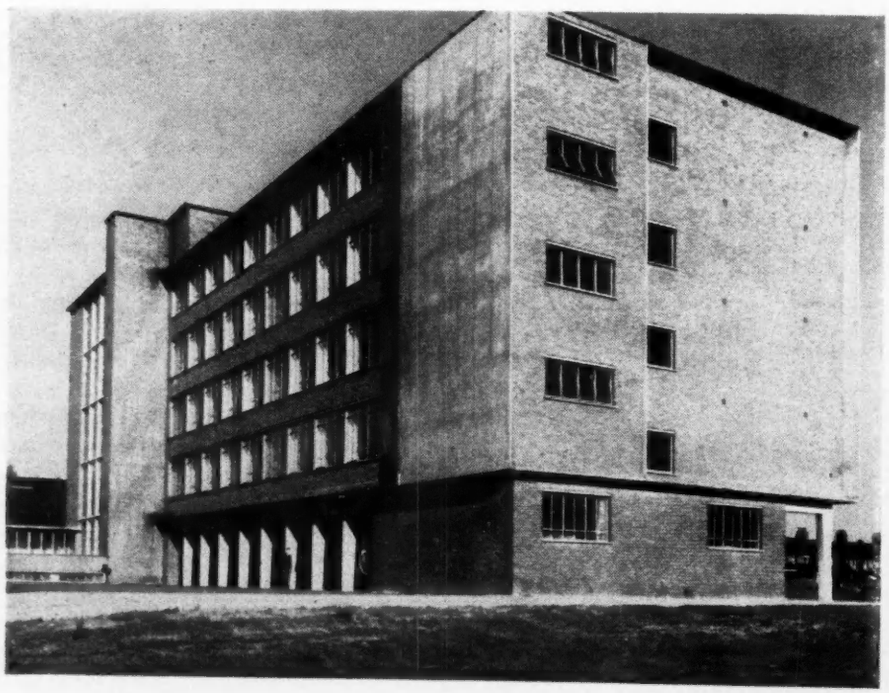
vertical ducts connected by a horizontal duct over the corridor at each floor level. This gives flexibility for any future alteration of layout as services may be connected at any point.

Finishes: Externally the building is faced with Buckinghamshire multi-coloured bricks, whilst concrete slabs are faced with Criggion granite and Derbyshire spar. Internally the walls are generally fair-faced flint lime bricks, or are plastered.

The consultants were Mr. W. V. Zinn (Structural) and Messrs. G. H. Buckle and Partners (Electrical). The general contractors were Messrs. Lavender and McMillan, Ltd.

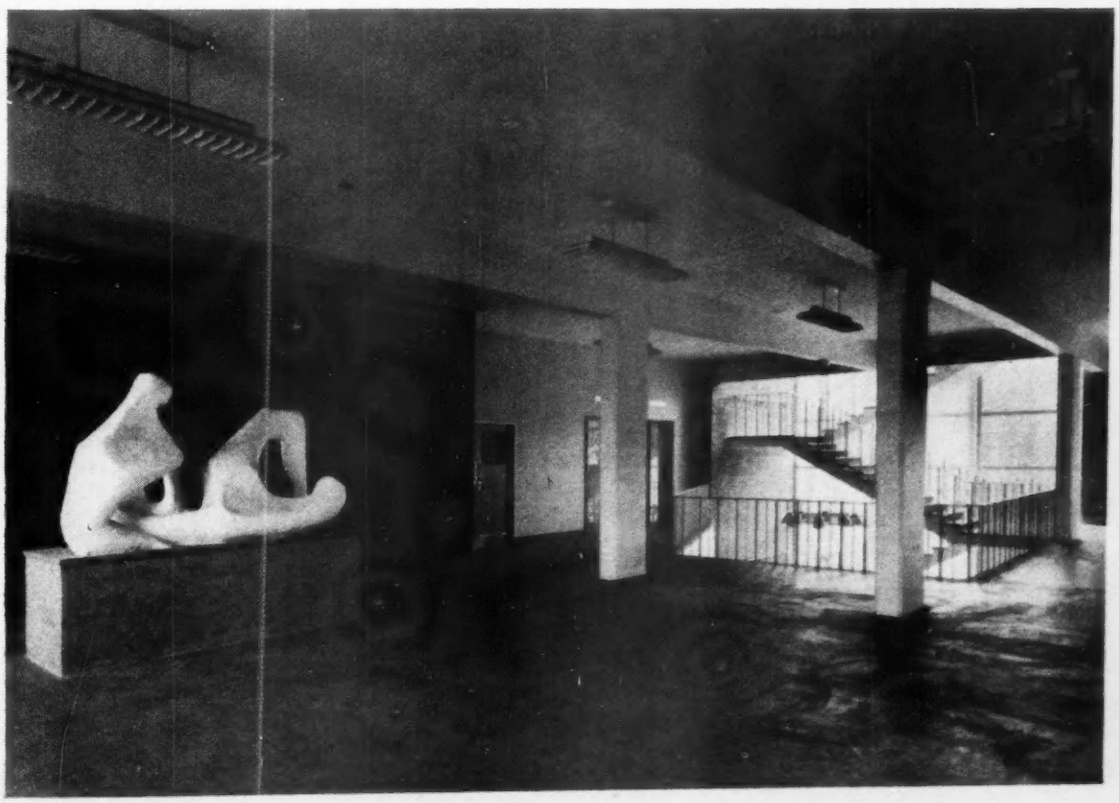
Sub-contractors and suppliers were: H. J. Greenham (1929), Ltd., brick facings (external); Moler Products, Ltd., flue linings; Uxbridge Flint Brick Co., brick facings (internal); Burns Bros. (London), Ltd., cast-iron drainage goods; Dover Engineering Works, Ltd., duct covers N. F. Ramsay and Co., Ltd., ironmongery; Clark, Hunt, and Co., Ltd., balustrading; J. Gibbons, Ltd., metal windows; Fabricrete Products, precast concrete facing slabs; W. James and Co., Ltd., metal door frames; Waygood Otis, Ltd., electric lifts; Z. D. Berry and Sons, Ltd., heating, hot-water supply and gas installations; Superlith, Ltd., woodwool slabs; London and Sussex Merchants, Ltd., Hornton stone; Frazzi, Ltd., "Paropa" roofing; Greenwood and Airvac Vent Co., Ltd., ventilators; T. and W. Ide, Ltd., glass domes; T. A. Harris, Ltd., drinking fountains; Shutter Contractors, Ltd., rolling shutter; W. Mallinson and Sons, Ltd., w.c. partitions.

Shanks and Co., Ltd., sanitary fittings; Broads and Co., Ltd., glazed stoneware channels; Leaderflush, Ltd., flush doors; Setchell and Son, Ltd., slate copings; Runnymede Rubber Co., Ltd., rubber flooring; J. A. King and Co., Ltd., precast concrete windows; Brights Asphalte Contractors, Ltd., asphalt tanking; Caledonian Products, Ltd., concrete tiles; Thorpe and Thorpe, Ltd., electrical installations; Braithwaite and Co. Structural, Ltd., water storage tank; Jaconello, Ltd., terrazzo stair treads; C. and T. (Pyroc Contracts), Ltd., "Pyroc" finishes; A. J. Binns, Ltd., cloak fittings; Surrey Bituminous Supplies, Ltd., tarpaving; J. W. Gray and Sons, Ltd., lightning conductor; Haywards, Ltd., cast-iron spiral stair; Murray and Jones, Ltd., paint supplier; A. Gallenkamp and Co., Ltd., laboratory receivers; Woodworth Joinery, Ltd., and Builders Supply, Ltd., joinery; Varilectric, Ltd., fluorescent light fittings; Troughton and Young, Ltd., Tungsten light fittings; Guntex, Ltd., Tyrolean Cullamix finish; G. W. King, Ltd., trolley gear; Lockerbie and Wilkinson, tubular gates; and Horace W. Cullum and Co., Ltd., acoustic tiles.



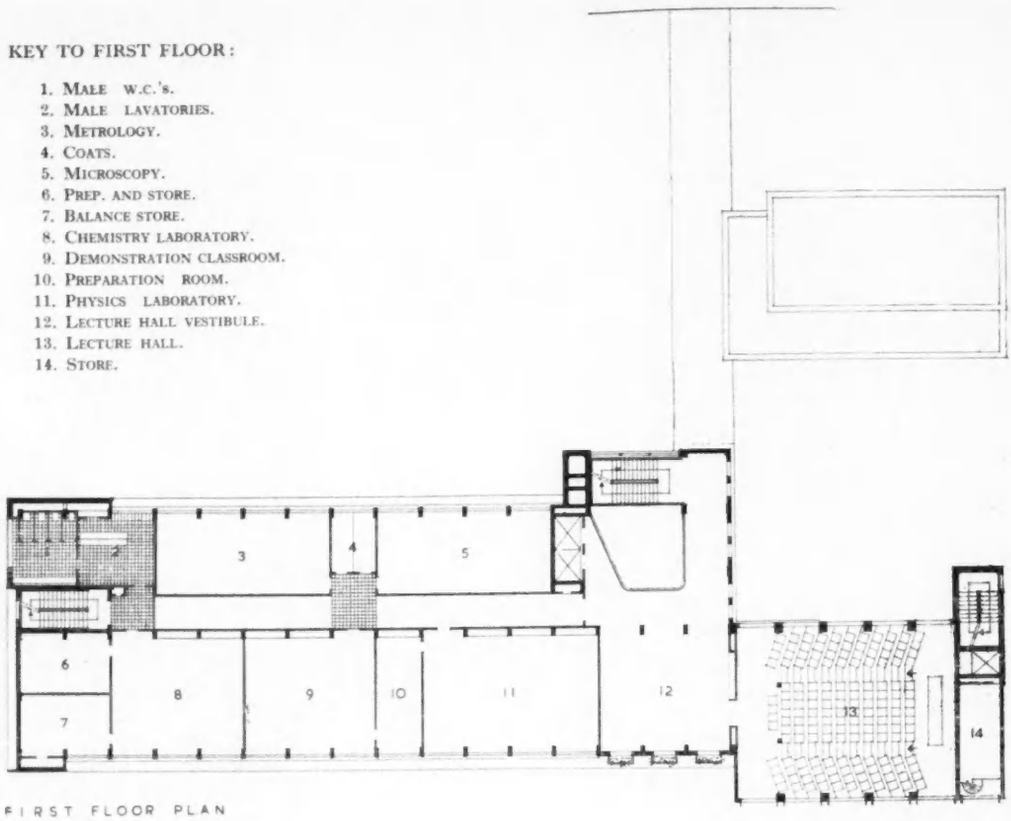
A view from south-west.

The main entrance hall. Below : Lecture hall foyer and main staircase. The sculptured figure is the work of students of the college.



KEY TO FIRST FLOOR:

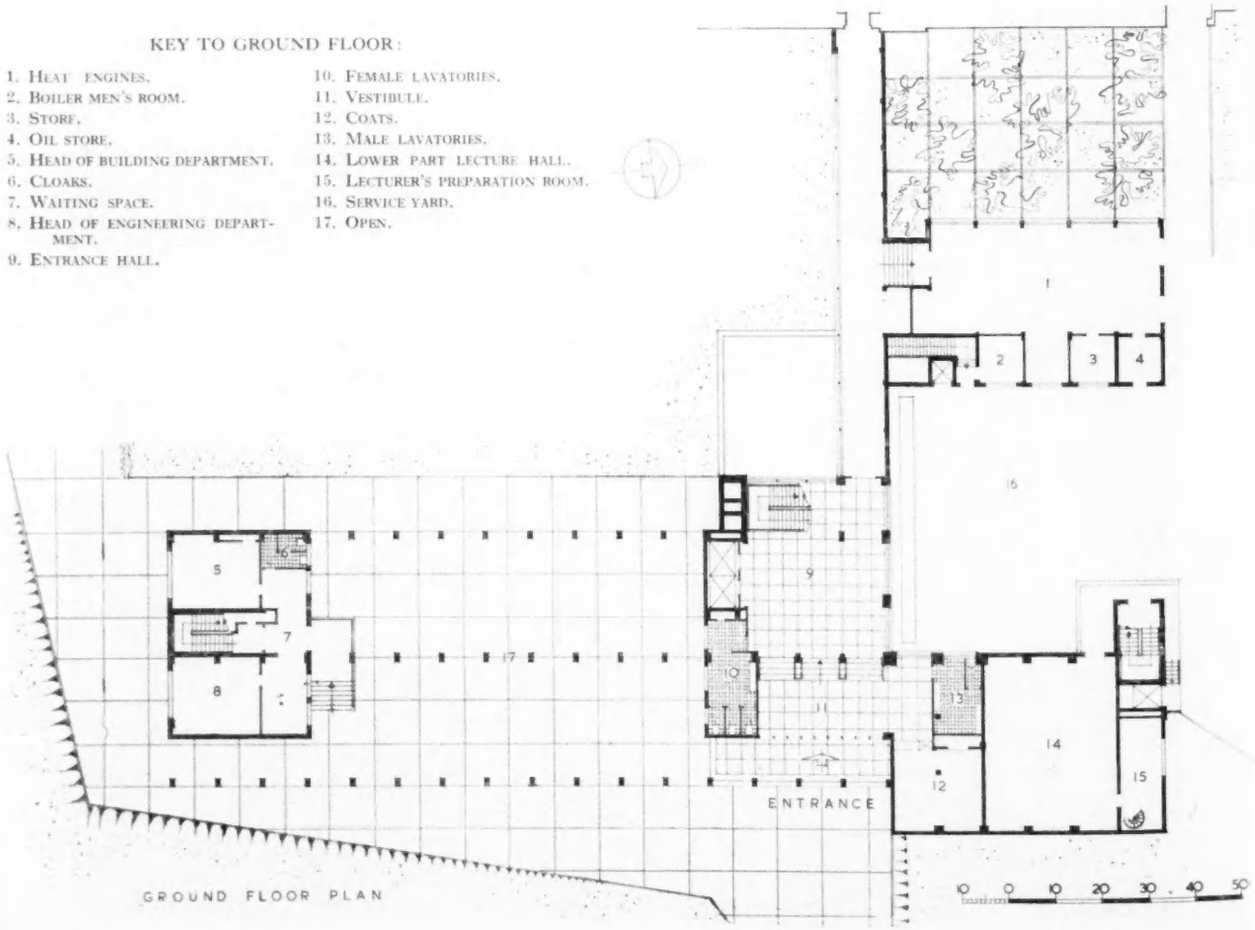
1. Male w.c.'s.
2. Male lavatories.
3. Metrology.
4. Coats.
5. Microscopy.
6. Prep. and store.
7. Balance store.
8. Chemistry laboratory.
9. Demonstration classroom.
10. Preparation room.
11. Physics laboratory.
12. Lecture hall vestibule.
13. Lecture hall.
14. Store.



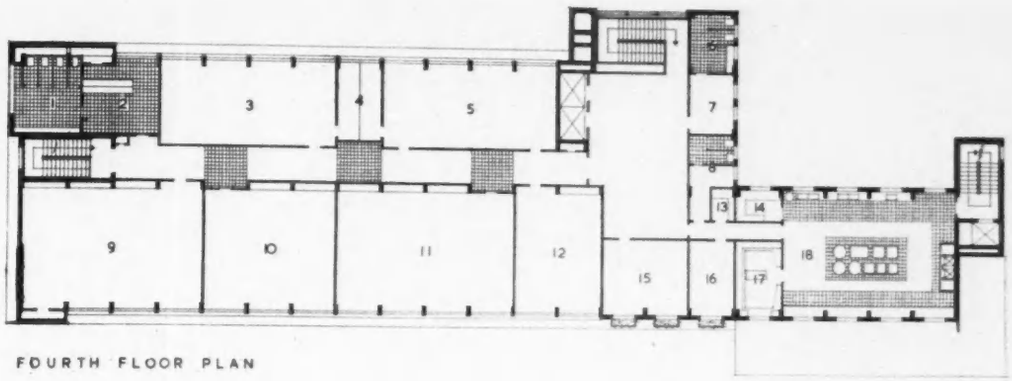
FIRST FLOOR PLAN

KEY TO GROUND FLOOR:

1. Heat engines.
2. Boiler men's room.
3. Store.
4. Oil store.
5. Head of building department.
6. Cloaks.
7. Waiting space.
8. Head of engineering department.
9. Entrance hall.
10. Female lavatories.
11. Vestibule.
12. Coats.
13. Male lavatories.
14. Lower part lecture hall.
15. Lecturer's preparation room.
16. Service yard.
17. Open.



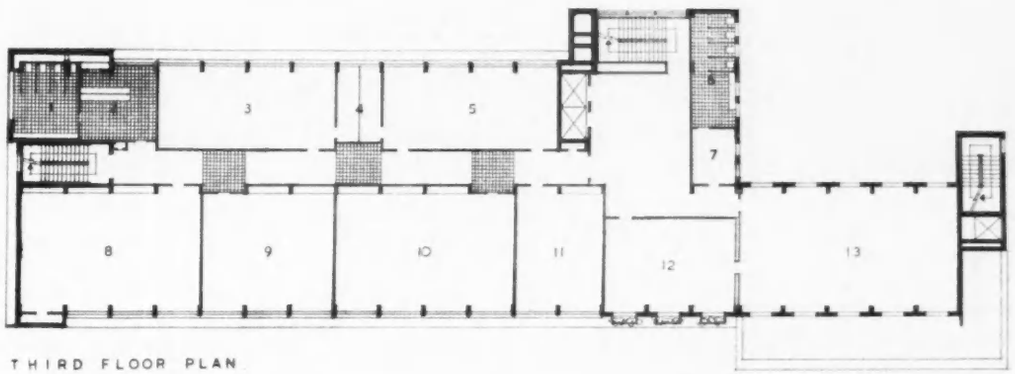
GROUND FLOOR PLAN



FOURTH FLOOR PLAN

KEY TO FOURTH FLOOR :

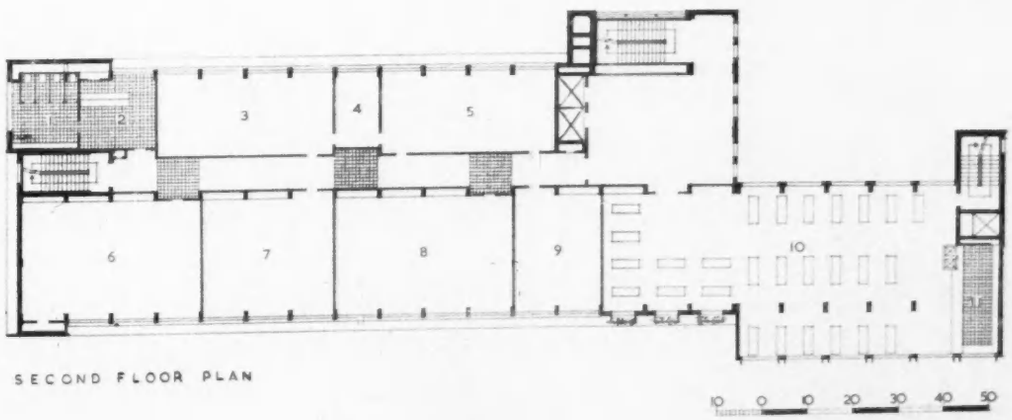
1. MALE W.C.'s.
2. MALE LAVATORIES.
3. DRAWING OFFICE.
4. COATS.
5. DRAWING OFFICE.
6. FEMALE LAVATORIES AND W.C.'s.
7. FEMALE STUDENT REST ROOM.
8. KITCHEN STAFF CLOAKS.
9. DRAWING OFFICE.
10. DRAWING OFFICE.
11. DRAWING OFFICE.
12. ART ROOM.
13. CHINA STORE.
14. VEGETABLE STORE.
15. RESEARCH ROOM.
16. KITCHEN STAFF ROOM.
17. DRY STORE AND LARDER.
18. KITCHEN.



THIRD FLOOR PLAN

KEY TO THIRD FLOOR

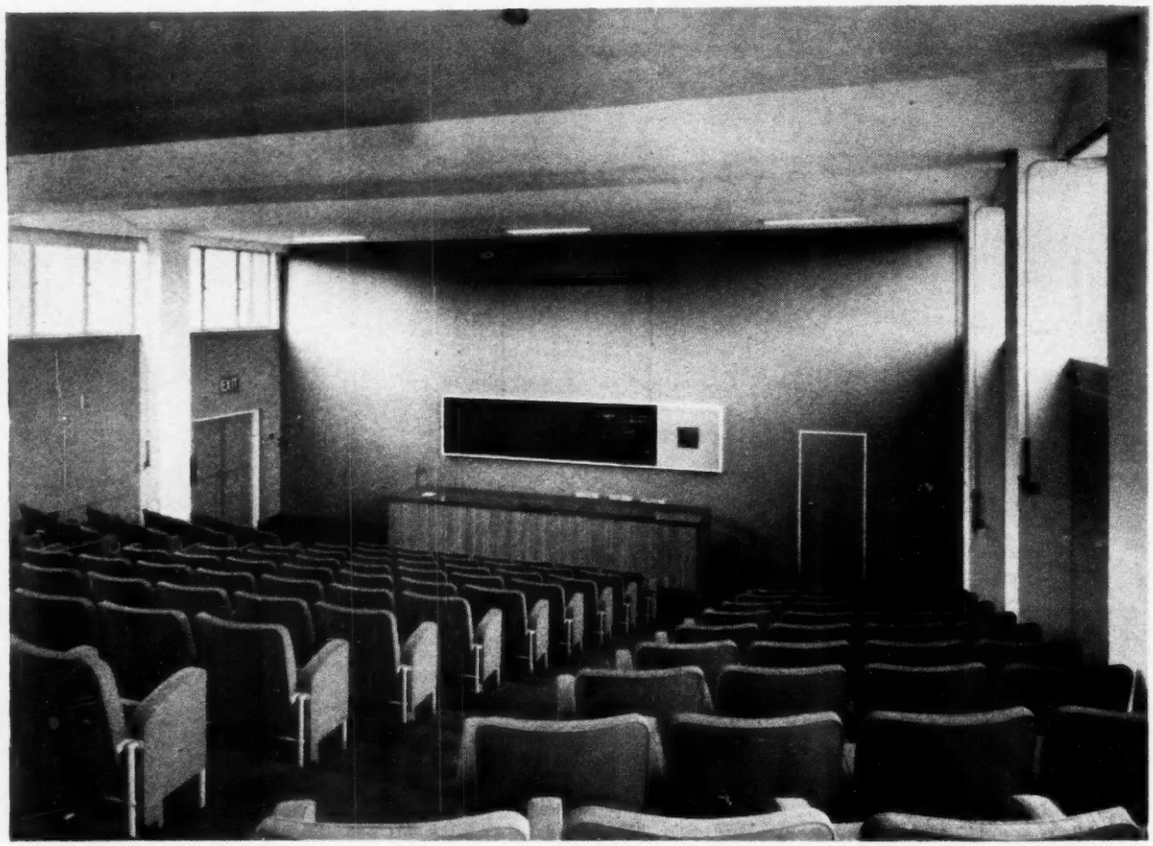
1. MALE W.C.'s.
2. MALE LAVATORIES.
3. DRAWING OFFICE.
4. COATS.
5. DRAWING OFFICE.
6. MALE STAFF W.C.'s AND LAVATORIES.
7. MALE STAFF COATS.
8 & 9. CLASSROOMS.
10. DRAWING OFFICE.
11. BLUEPRINTS.
12. GOVERNORS' ROOM.
13. STAFF LOUNGE.



SECOND FLOOR PLAN

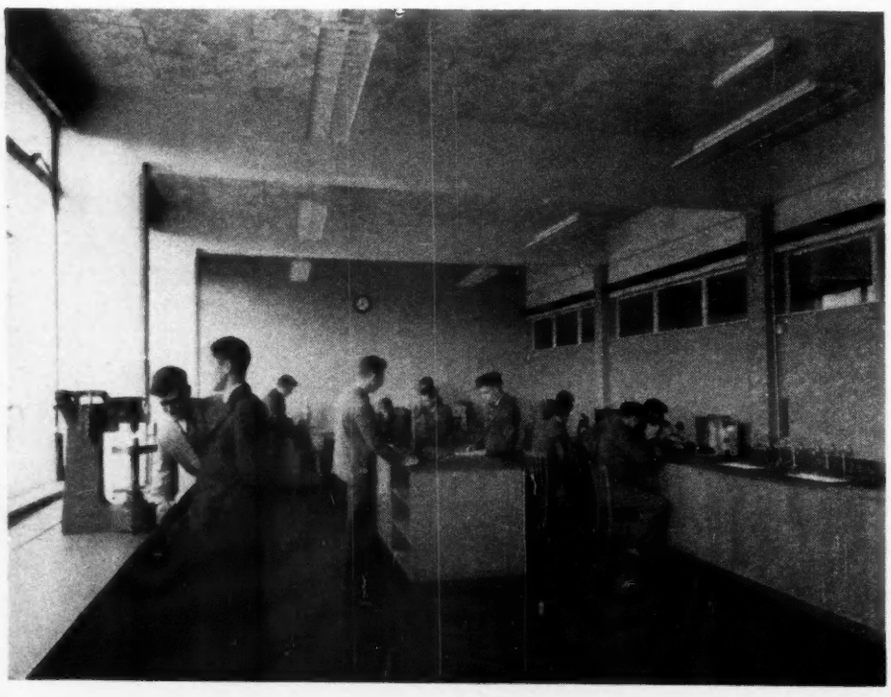
KEY TO SECOND FLOOR :

1. MALE W.C.'s.
2. MALE LAVATORIES.
3. CLASSROOM.
4. COATS.
5. CLASSROOM.
6. ARCHITECTURE.
7. BUILDING AND ARCHITECTURE.
8. BUILDING AND ARCHITECTURE.
9. PHOTOGRAPHY.
10. DINING HALL.
11. SERVERY.



The lecture hall. This can be let off to the public.

EXTENSION TO WILLESDEN TECHNICAL COLLEGE, FOR MIDDLESEX E.C.



Microscopy laboratory.

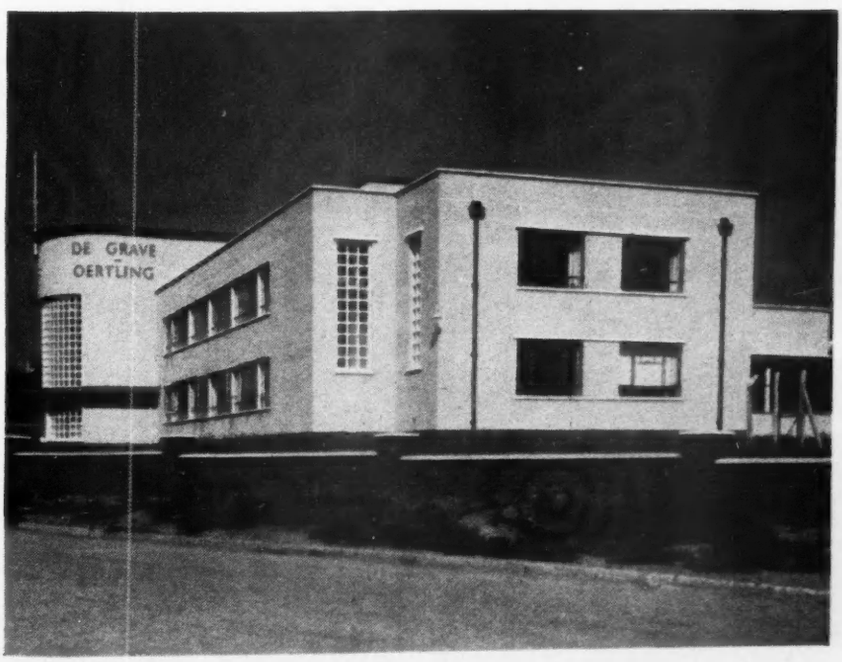
View of office block from south-west.

FACTORY, ST. MARY CRAY, KENT for De Grave, Short and Co., Ltd.

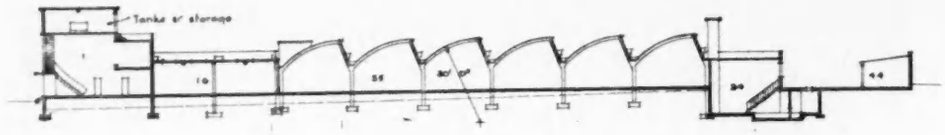
ARCHITECTS :
FAIRTLOUGH AND MORRIS, F/ARIBA.

THIS factory, for Messrs. De Grave, Short and Co., Ltd., was built for the production of precision balances, and consists of office block, assembly section, production area, canteen, lavatories, loading dock and ancillary sections. Generally, a high degree of cleanliness and dustless finishes was required throughout. The construction of each of the sections was varied to suit its particular purpose.

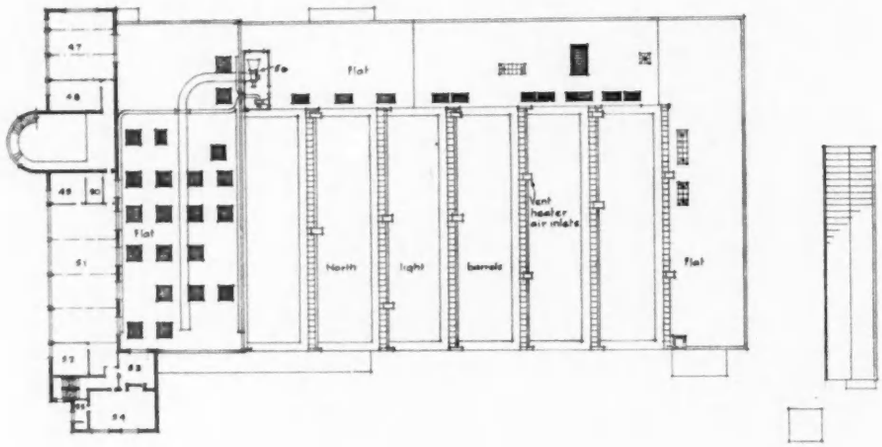
The office block is a two storeyed steel-framed



View of south-east corner of office block.

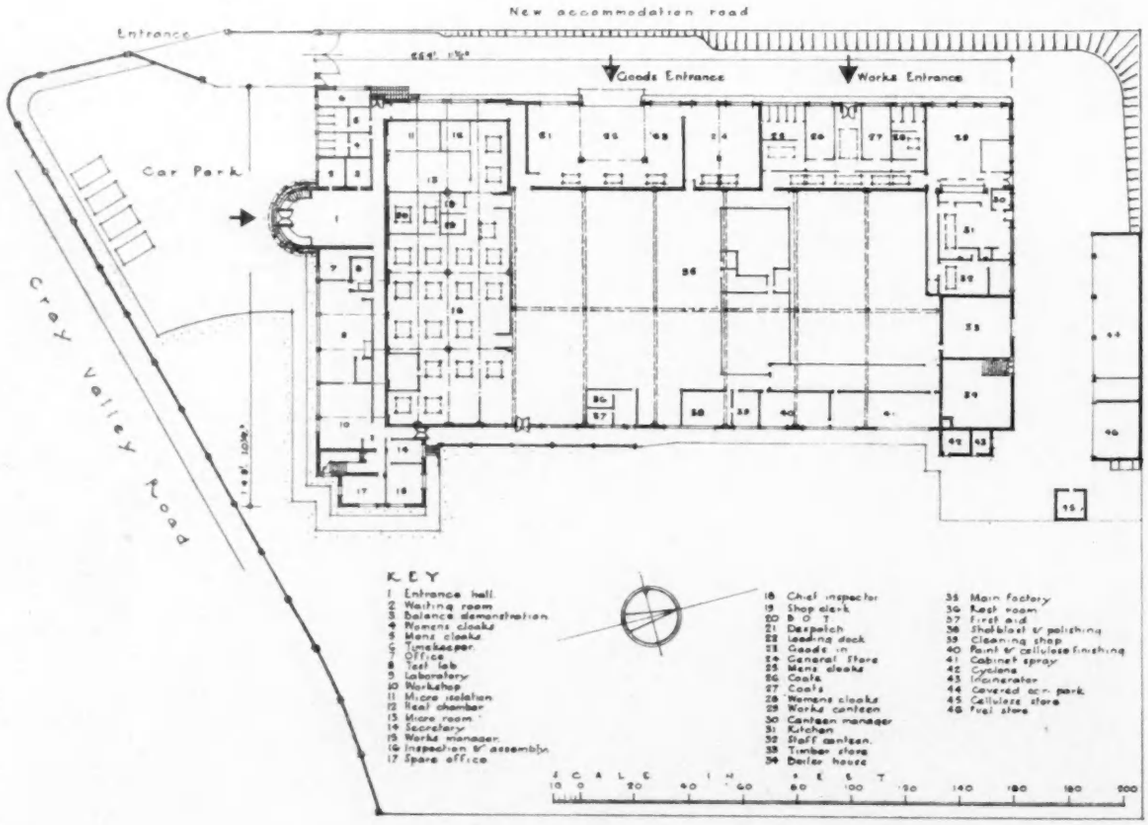


Longitudinal Section



47 Drawing office
48 Chief draughtsmen
49 Sales manager
50 S. M. secretary
51 General office
52 Secretary
53 General manager's secretary
54 General manager
55 General manager's cloaks
56 Motor room

First floor & roof plan



Ground floor plan

Detail of the main entrance feature.

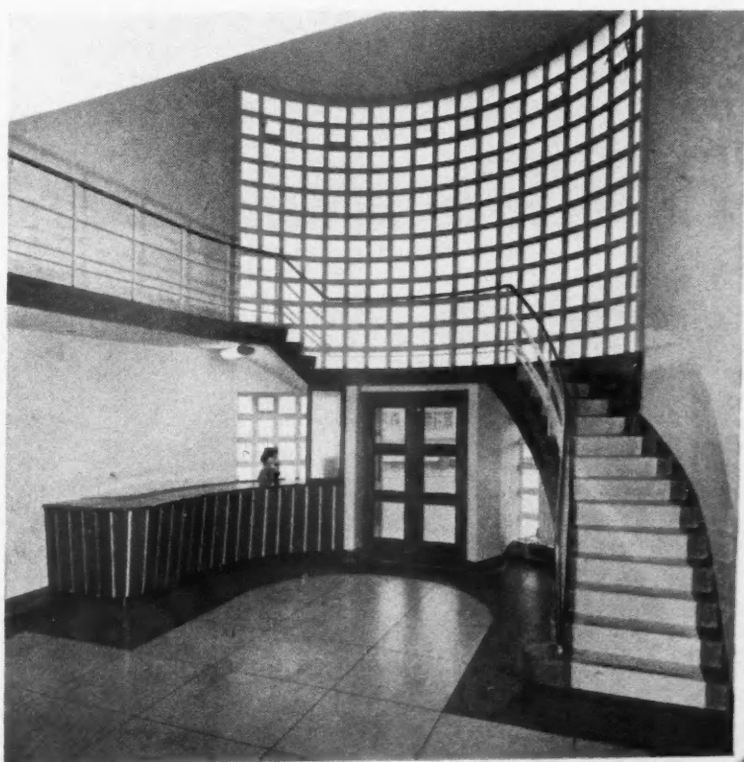
building with a large entrance hall designed to be used also as a display space. The office floors and corridor are finished with jointless composition, and the entrance hall with terrazzo.

The conditions in the assembly section called for a flat roof with good natural light intensity but no direct sunlight, filtered air and minimum air movement and temperature range. This section is of r.c. frame construction, the roof being insulated with vermiculite and flooded during hot weather. Heating is entirely by warmed and filtered air distributed in ducts formed in Fosalsil and Gypklith above the roof level. Natural lighting is entirely by pavement lights of the double insulating type. The floor is finished with jointless composition and services are housed in floor ducts.

The production area is of north light r.c. barrel vault construction, cast on hardboard-faced shuttering. The roof slopes are insulated with vermiculite and covered with roofing felt, the ends and valley gutters being finished in asphalt. The floors are finished with granolithic, with services in floor ducts.

The ancillary sections—including loading docks, stores, lavatories, cloaks, boiler house, canteen and kitchen — have brick load-bearing walls and flat r.c. roofs. Heating, except in the assembly section, is by low-pressure hot water. All internal and roof and wall surfaces are finished in oil paint. The general contractors were Messrs. E. O'Sullivan, Ltd., of St. Mary Cray, Kent.

Sub-contractors were: Facing bricks, Sevenoaks Brick Works, Ltd., and Baggeridge Brick Co.; "Bison" precast flooring, Concrete, Ltd.; metal windows, Crittall Manufacturing Co., Ltd.; north light glazing, Haywards, Ltd.; Glas-crete windows and roof lights, J. A. King and Co., Ltd.; asphalt and roofing felt, General Asphalte Co., Ltd.; vermiculite insulation, Meta Mica, Ltd.; granolithic flooring, Prodorite, Ltd.; terrazzo flooring, Alan Milne, Ltd.; composition flooring, British Doloment Flooring Co., Ltd.; wood block flooring, G. C. Constructional Flooring Co., Ltd.; artificial stone, Kendell's Stone and Paving Co., Ltd.; structural

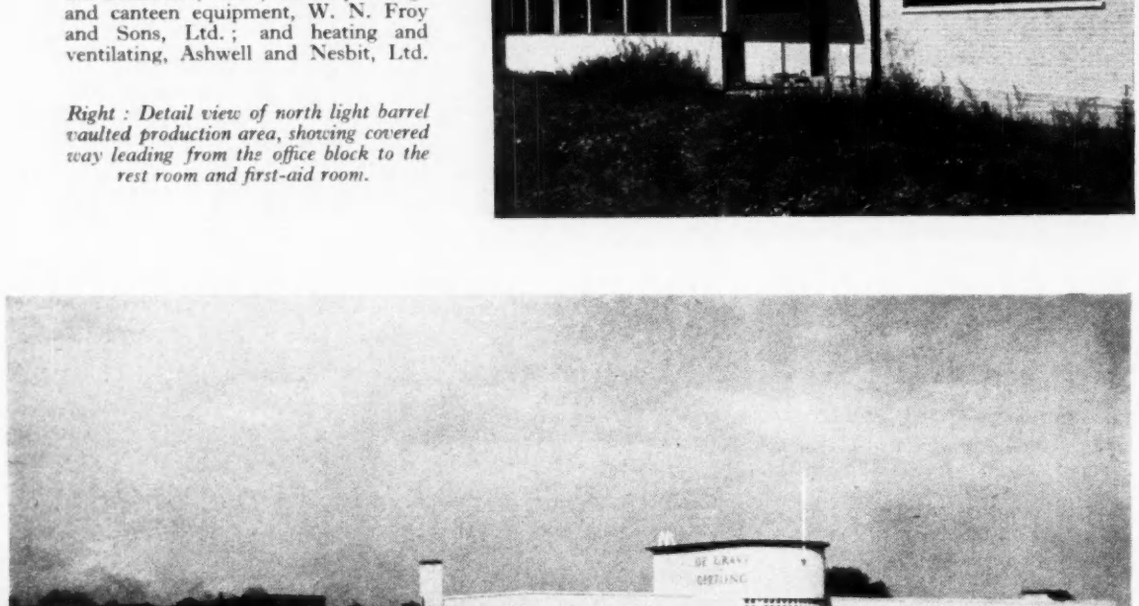


Interior of main entrance feature, showing reception and main staircase.

FACTORY, ST. MARY CRAY, KENT

steel, Somerville Barnard Construction Co., Ltd.; roller shutters, Shutter Contractors, Ltd.; steel partition, Sankey Sheldon, Ltd.; fencing, Penfold Fencing and Engineering Co., Ltd.; entrance gates, David Rowell and Co., Ltd.; staircase balustrade, Bayliss, Jones, and Bayliss, Ltd.; ironmongery, Yannedis and Co., Ltd.; electrical installation, Williamson Electrical Co., Ltd.; light fittings, Crompton Parkinson, Ltd.; sanitary fittings and canteen equipment, W. N. Froy and Sons, Ltd.; and heating and ventilating, Ashwell and Nesbit, Ltd.

Right : Detail view of north light barrel vaulted production area, showing covered way leading from the office block to the rest room and first-aid room.



Above : General view of factory from south-west.

Left : A general view of the assembly section.

NOTES & NEWS

NEW YEAR HONOURS

THE architectural profession came so well out of the Birthday Honours last year that it would have been too much to expect many names in the first new year list of the Queen's reign. Instead, in an interesting mixed bag (see page 42), in which many sides of the industry share, the knighthoods conferred on Professor Holford and Mr. Harry Pilkington will give especial pleasure. Mr. Holford's work for town planning, both as Professor at London University and in the practical field, is properly recognised, as are Mr. Pilkington's far-sighted efforts for the Council of Building Materials Producers and for the building materials export market to Canada and the U.S.A. Mr. Hutchison, P.R.S.A. (who painted the last R.I.B.A. presidential portrait); Mr. James Millar, Lord Provost of Edinburgh and a builder; and Mr. R. Bruce Wycherley, managing director of the Abbey National Building Society, are others similarly honoured with knighthoods.

Sir Ernest Gowers' work in aesthetic fields is rewarded with a G.C.B., and the C.B. conferred on Professor W. H. Glanville, director of the Road Research Laboratory, will also give much pleasure. Among the C.B.E.s occur the names of Mr. Carnegie, Devon County Surveyor, whose work in the Lynmouth disaster is thus noted; Mr. Ove Arup, described as "an architectural engineer," but whose contribution to contemporary design is fully worthy of recognition under any description; and Mr. M. B. Blackshaw, superintending architect for housing, Ministry of Housing and Local Government. An O.B.E. goes to Mr. Robey, past-president of Building Industry Distributors, and particularly to be noted are awards of the B.E.M. to a number of craft foremen and chargehands.

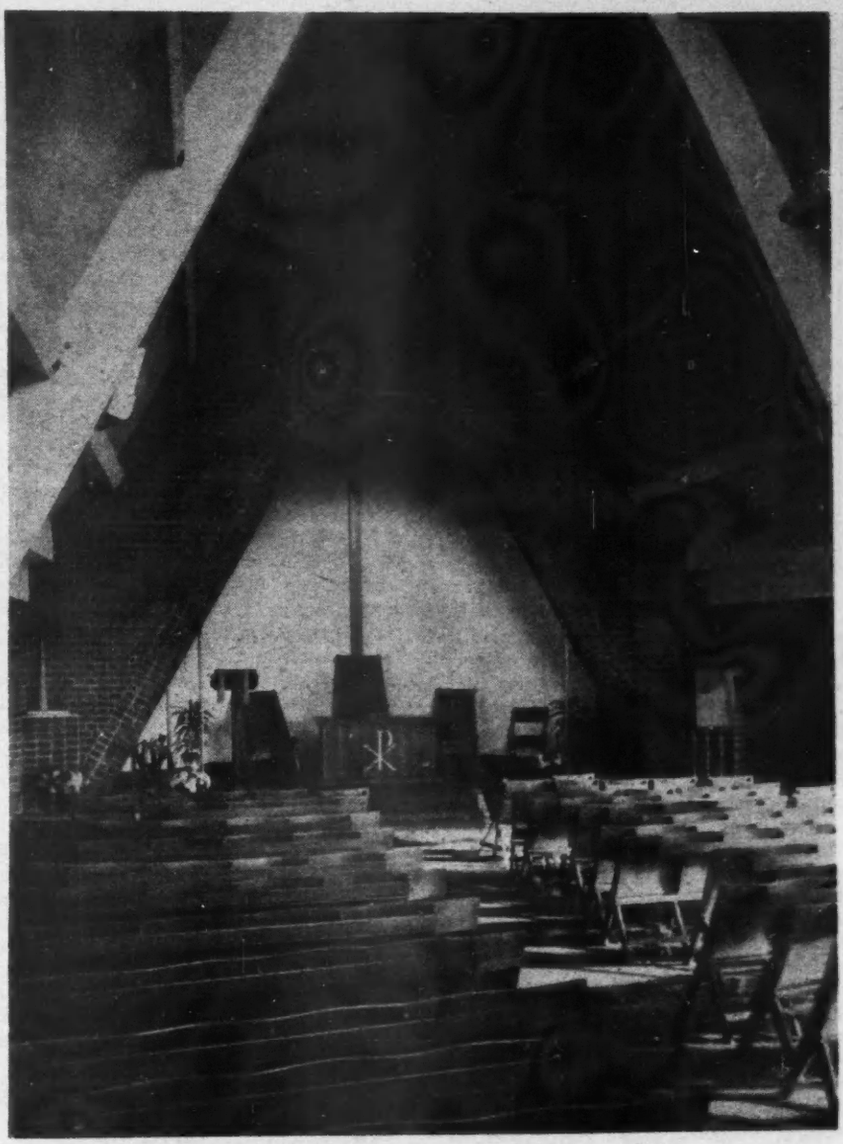
AMERICAN HOTEL IN LONDON

AN AMERICAN FIRM, Knott Hotels Corporation, are to build a hotel in New Bond-street. The architect for the new building is Mr. Michael Rosenauer, F.R.I.B.A., and sketch plans have been approved by the London County Council town planning committee. They were passed on condition that detailed plans are submitted before any work starts.

The proposal is for a hotel of six-and-a-half storeys which would have an arcade of shops on the ground floor. This would conform to the L.C.C.'s road widening proposals for New Bond-street. It would start on the inner edge of the existing pavement and there would be access for pedestrians. The hotel would be built over the arcade and conform to the requirements of the London Building Act, which in practice provides for a height of about 80 ft. on the face, with an additional 20 ft. placed farther back.

THE MODULAR SOCIETY

THE INAUGURAL MEETING of the Modular Society—proposed by Mr. Mark Hartland Thomas, O.B.E., F.R.I.B.A.—will be held at the Royal Society of Arts, Adelphi, W.C.2, on Friday, January 23, at 2.30 p.m.



LOCKLEAZE CHURCH, BRISTOL. This new Presbyterian church, of contemporary design, has a number of novel features, including coloured glass walls and a large diamond-shaped west window, out of which runs the cross rising above the steep lines of the roof. At the rear there is a flat for the minister, above the church hall, which itself has a gaily coloured entrance porch with four large windows facing east. The architects are Messrs. Burrough and Hannam, F./A.R.I.B.A.

R.I.B.A. LIBRARY GROUP

THE NEXT meeting of the R.I.B.A. Library Group will take place on January 12, at 6 p.m., at Sir John Soane's Museum, 13, Lincoln's Inn Fields, W.C.2. The evening will be devoted to a study of drawings possessed by the museum and the collection will be introduced by the curator, Mr. John Summerson, C.B.E., F.S.A., A.R.I.B.A., who is chairman of the group. Drawings by John Thorpe, Wren, Chambers, the Adam brothers and George Dance will be on view.

"TOUTING FOR WORK"

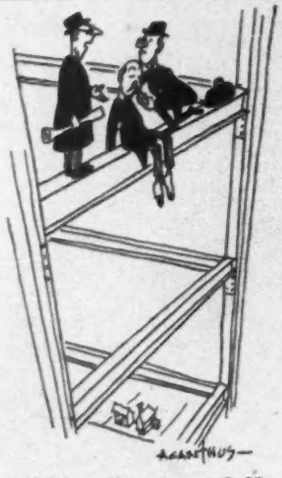
THE Architects' Registration Council has decided that, in the matter of touting letters by architects to local authorities, the Institute of Registered Architects should be added to the list of professional bodies to whom a local authority may refer any architect offering his services. The names of the other professional bodies concerned were given in our last issue in a report of the meeting of the Council on December 19.

TROPICAL ARCHITECTURE

Applications for membership of the Conference on Tropical Architecture, to be held at the School of Architecture, University College, London, W.C.1, during Easter, will be received by the Hon. Secretary of the Conference at that address until the end of this month.

NATIONAL BUILDINGS RECORD

THE ELEVENTH annual report of the National Buildings Record, issued from 37, Onslow Gardens, London, S.W.7, stresses "the peril in which our historic buildings continually stand" and says that the country is puzzled that recent legislation, which seemed to promise



"My client was O.K., doctor, until I mentioned the cost of building."

much, has in fact accomplished little. More and more large houses of architectural and historic interest are being abandoned or demolished. Photographic illustrations of eight such places are given in the report, i.e., Gopsall Hall, Leics; Alton Towers, Staffs; Tyneham, Dorset; Weald Hall, Essex; Hadlow Castle, Kent; Hafod, Cardigan; Guy's Cliffe House, Warwicks; and Kilnwick Hall, Yorks. The council are finding their own work none too easy and have accumulated a deficit of £1,386, which no doubt would have been heavier but for some enthusiastic voluntary support. The N.B.R. has built up a collection of records that in number and quality can stand comparison with older collections on the Continent, but in premises, equipment, storage and darkroom facilities it is badly handicapped. Nevertheless, its work is becoming better known and more extensively used. It deserves far more generous support.

CAMBRIDGE PRESERVATION

THE TWENTY-THIRD annual report (year to June 30, 1952) of the Cambridge Preservation Society contains a summary of the County Council's development plan for the County of Cambridge, together with the comments, generally favourable, of the Society on its various features. As to the accelerated development of the villages around the City, the Society is opposed to a proposed large increase in the size of Coton involving development of land protected from building by statutory covenants. Though supporting the City's road plans generally, the Society expresses strong opposition to the scheme for wholesale road-widening and for improving the circulation of traffic in the central University area.

The report includes a reference to the problem of the land between St. Peter's Church and Northampton-street, which has lain derelict for many years. The City Surveyor has now produced plans for the erection here of 20 houses for old people with provision for a central hall or meeting place, a scheme which has the enthusiastic support of the Society. A photo of the site as it is and a perspective drawing of the housing scheme are given. The report, which includes a list of members, is issued from Cambridgeshire House, 7, Hills-road, Cambridge.

YORK CIVIC TRUST

YORK CIVIC TRUST, Academic Development Committee, has issued its annual report for 1952, which records a very successful season, particularly with regard to its Summer Schools of Archives and Historical Research and of Architectural Study. It was announced in August that the late Mr. William Borthwick had nominated the Trust as residuary beneficiaries of his estate. This bequest, which will eventually amount to £60,000, will provide a substantial endowment for the Institute of Historical Research at St. Anthony's Hall, to be named after Mr. Borthwick.

The Trust have also issued syllabuses of two courses to be held on Protection and Repair of Ancient Buildings, one, from March 23 to April 4, 1953, dealing with general problems, and the other, from April 9 to 16, with the care of churches. Full particulars of these courses and of the other activities of the Trust may be obtained from the Secretary, Mr. J. P. West-Taylor, M.A., St. Anthony's Hall, Peaseholme Green, York.

NEW COLOUR ATLAS

BUILT UP from the four chromatic colours, yellow, red, blue and green, and the two achromatic colours, white and black, a new type of colour atlas has been evolved by the Swedish architect Sven Hesselgren, S.A.R., of Stockholm. It is intended to serve as a common denominator for all users of colour—architects, builders, painters, decorators, printers, colour manufacturers, etc.

The idea is to make it possible to refer to colours by number rather than by sample.

Twenty-four hues having been established from the four chromatic colours, these are graded and scaled according to lightness, that is the variation in a 24-stage range between white and black, and also according to saturation, which range is also scaled in 24 degrees from the achromatic (O) to the highest degree of saturation possible with the 24 pigments used for the atlas. Reflection factors of the lightness norms are also measured and indicated.

Worked out with the help of the Stockholm Royal Institute of Technology and the Swedish Government's Institute for Handicraft, as well as certain colour manufacturing firms who have placed staff, premises and different kinds of material at Sven Hesselgren's disposal, the atlas contains 509 shades, reduced from an original 30,000 mixtures which were examined. From these, some 2,000 colours can be accurately determined.

TAUNTON CASTLE

RENOVATIONS which will cost about £20,000 have started in Taunton Castle, which houses the Somerset County Museum. New lighting and heating systems are to be installed in the Great Hall and a floor of cork tiles on a concrete foundation will replace the wooden floor built during the last renovations nearly a hundred years ago. Similar work will be carried out in the Somerset Room, which is to be restored for exhibition purposes after many years of use only as a store. It will be redesigned to allow occasional picture exhibitions. It will also be used for concerts for audiences of about 200. The fine eighteenth-century staircase taken from the vicarage of St. Mary Redcliffe, Bristol, will be installed to connect the Great Hall with the Somerset Room. The work will take up to 12 months to complete.

PROFESSIONAL ANNOUNCEMENTS

Owing to the retirement of MR. F. J. WATSON-HART, F.R.I.B.A., the partnership now subsisting between Mr. Watson-Hart and MR. A. W. WILLIS, L.R.I.B.A., under the style of VAL. MYER, HART AND WILLIS, at 22, Grosvenor Crescent-mews, Hyde Park Corner, London, S.W.1, is being dissolved by mutual consent on January 16. From that date Mr. Willis, incorporating the firm, will continue to practise from 16, Castle Hill-avenue, Berkhamsted, Herts.

MR. KENNETH ANNS, F.R.I.B.A., of 1, Lincoln's Inn Fields, London, W.C.2, has opened a branch office at 1, Church-terrace, Richmond, Surrey, where he will be pleased to receive trade catalogues.

MR. VINCENT BURR, L.R.I.B.A., has announced that, as from January 1, he has taken into partnership his two associated architects, MR. EDMUND G. HARKER and MR. JOHN J. HICKIE, registered architects, and that his firm will now be known as VINCENT BURR AND PARTNERS. The practice will continue to be carried on at 85, Gower-street, W.C.1.

MR. ERIC C. WILKIE has commenced practice on his own account under the style of Eric. C. Wilkie, A.R.I.C.S., A.I.A.S., chartered quantity surveyor, at 50, Greenway-avenue, Taunton (Tel.: Taunton 5300), where he will be pleased to receive trade catalogues, etc.

MR. J. YOUDAN BRIGGS, F.I.A.S., F.I.Q.S., surveyor and quantity surveyor, of 42, African-chambers, 19, Old Hall-street, Liverpool, has opened a branch office at 31–33, Westgate, Wakefield, under the superintendence of MR. F. G. WILLIAMS, A.R.I.C.S., A.I.Q.S., who will be pleased to receive trade catalogues, etc.

COMING EVENTS

MONDAY, JANUARY 12

R.I.B.A.—Library Group meeting. Sir John Soane's Museum, 13, Lincoln's Inn Fields, W.C.2. 6 p.m.

TUESDAY, JANUARY 13

INSTITUTION OF SANITARY ENGINEERS.—"Waterproofing of Concrete Structures," by Mr. Isaac Hopkins, M.I.Struct.E. Caxton Hall, Westminster, S.W.1. 6 p.m.

ILLUMINATING ENGINEERING SOCIETY.—"Power Station Lighting," by Mr. P. D. Figgis. 2, Savoy Hill, W.C.2. 6 p.m.

WEDNESDAY, JANUARY 14

INCORPORATED INSTITUTE OF BRITISH DECORATORS.—"Architecture and the Decorative Arts," by Sir Hugh Casson, F.R.I.B.A. Building Centre, Store-street, W.C.1. 6.30 p.m.

L.M.B.A. (CENTRAL AREA NO. 1).—Luncheon at which Mr. Woodbine Parish, president, will be present. Derry and Tom's Restaurant, Kensington High-street, W.8. 1 p.m.

FRIDAY, JANUARY 16

INSTITUTE OF HOUSING.—"Housing and the Borough Treasurer," by Mr. W. O. Atkinson, M.B.E., F.I.M.T.A. Town Hall, St. Marylebone, N.W.1. 7 p.m.

FROM "THE BUILDER" OF 1853

Saturday, January 8, 1853

THE NEW ELECTRIC WIRES.—Men connected with the Electric Telegraph Company's works have been laying down the electric wires through Westminster, the Strand, and the curb-way in Fleet-street, Ludgate-hill, St. Paul's Churchyard, and Cheapside, to the General Post-office, St. Martin's-le-Grand. The new wires are 25 in number, forming the appearance of an open cable, and are not only galvanised over, but coated in gutta percha, and covered over with saturated tar tape. These wires pass through the iron pipes or tubes which were laid down a few months ago, so that they are protected from any injury.

CORRESPONDENCE

THE COST OF BUILDING

To the Editor of *The Builder*

SIR,—The complete planning of a job before work starts is, as Mr. Loverock points out in your issue of January 2, one of the most important factors in raising building productivity and in the reduction of building costs. The Royal Institute of British Architects and the National Federation of Building Trades Employers are in entire agreement with the views of the Working Party and the Anglo-American Productivity Team on this point and in 1951 they decided to issue a joint statement calling the attention of building owners to the way in which it is possible to economise in both time and money by supplying full and complete information at the earliest possible stage and by refraining from making alterations in plans.

This joint statement was subsequently published as a booklet entitled "The Building Owner and Planning in Advance" and copies were sent to Government contracting departments, local authorities, banks, insurance companies and other bodies likely to find it of practical interest. In addition, as many of your readers will recall, the full text of this statement was published by you, Sir, in your editorial columns (*The Builder*, June 15, 1951). A limited number of these booklets is still available for distribution to any of your readers who may like to have a copy.

WILLIAM D. BRYANT,
Public Relations and Press Officer,
National Federation of Building Trades Employers.
82, New Cavendish-street, W.1.

To the Editor of *The Builder*

SIR,—The letter from "Small Builder" (your issue of December 19), protesting about architects' last-minute variations when work is in progress, is, I am sure, a heart cry which is echoed throughout the building trade generally. As a clerk of works I see this sort of thing happen only too often to the exasperation and frustration of all concerned with the actual construction of the work.

In most cases the contractor, or sub-contractor, suffers in silence because he is scared to offend the architect by protesting and thus prejudicing his chances of obtaining future contracts.

Surely the obvious solution to this problem is for the R.I.B.A. to make it compulsory for budding architects to serve an apprenticeship at one of the basic trades, and thus gain valuable experience which will stand him in good stead all his life, instead of spending his early years at the drawing board, and learning theory only, rather than a combination of theory and practice.

Incidentally, I have seen much better drawings produced by evening-class students than by many full-time architectural students, together with details which show a much better grasp of the subject, obtained by practical experience.

C. W., LONDON.

MODEL BUILDING BYE-LAWS

To the Editor of *The Builder*

SIR,—The Ministry of Housing and Local Government has recently published its Model Building Bye-Laws, which will be used by local authorities throughout the country to bring their own bye-laws up to date.

The Structural Insulation Association has been gravely concerned at the low standard of "thermal insulation" required to fulfil the provisions of Bye-law No. 84. Many of the forms of construction sanctioned—some of which are cited below—fall far short of the modern minimum standards of insulation.

(*a*) *Roofs and Ceilings.* A pitched roof covered with tiles or slates on battens and felt, or, alternatively, a roof which has a thermal transmittance coefficient ("U" value) of not more than 0.42.

(*b*) *Walls* of not less than 8½ in. thickness of solid brickwork or blocks. These would have a "U" value of about 0.44 and 0.49 respectively.

(*c*) *Ground Floors* of ¾ in. nominal thickness tongued and grooved boarding on timber joists (which would have a "U" value of about 0.43), or floors so constructed as to have a "U" value of not more than 0.40.

In comparison, it will be recalled that the technical appendices of the Housing Manual from 1944 onwards (issued by the same Ministry) made the following recommendations :—

(*a*) *Roofs and Ceilings.* The "U" value should not exceed 0.20.

(*b*) *Walls.* "U" values of 0.20 to 0.25 are recommended and 0.30 is suggested as an absolute maximum.

(*c*) *Ground Floors.* The technical appendices state :—

> "The 'U' value for a solid ground floor is 0.15 to 0.20 depending on the finish and this is acceptable. A joisted wood floor with tongued and grooved boarding properly ventilated *provides poor insulation as its 'U' value is as high as* 0.40. A standard of not more than 0.30 should be aimed at and to attain this it is necessary to introduce insulating material below the boarding. All experience in results, however, goes to show that the present practice of providing properly constructed ground floors is a considerable improvement over the ventilated, joisted and boarded ground-floors."

In addition, in recent years various official committees have reported, and many official documents have been published, regarding the thermal insulation of houses. All have been unanimous in recommending higher standards of insulation, and it is generally agreed that thermal transmittance coefficients in the region of 0.20 are not only desirable but are fairly easy to obtain with little or no additional cost.

The new bye-law will undoubtedly add greatly to the difficulties of all those—including the Ministries concerned—who are striving to secure reasonable standards of thermal insulation. This Association feels that the publication of this bye-law is a retrograde step and that the Ministry has failed to take advantage of a valuable opportunity of securing a major contribution to the solution of the nation's fuel problems.

Before the war, this country had a relatively plentiful and cheap supply of fuel, but the position is different to-day and structures which might have been considered reasonably satisfactory then are, in the opinion of this Association, no longer acceptable; nevertheless, the bye-law allows of even lower standards of insulation than were common before the war. Furthermore, the effort to encourage the use of more efficient fuel-burning appliances will be largely wasted if the heat produced by them is dissipated with unnecessary rapidity to the outer air.

Finally, there is a serious danger that local authorities will, after reading the bye-laws, consider that, if its provisions are met, they will be erecting properly insulated houses. This, as has been shown, is far from being the case.

Strenuous efforts were made by this Association and other bodies to obtain a satisfactory alteration to the bye-laws when they were issued in draft form, but, unfortunately, these were not successful. It is understood that there will be no revision of the bye-laws for ten years, but, having regard to the fact that during that time some millions of houses are expected to be built, it is felt that publicity should be given to this matter now.

H. F. PAYNE, Secretary,
Structural Insulation Association.
32, Queen Anne-street, W.1.

JOHN DANDO SEDDING (1838-91)

To the Editor of *The Builder*

SIR,—It was interesting to see in the Exhibition of Victorian and Edwardian Decorative Arts at the Victoria and Albert Museum three objects designed by Sedding : a pall, a frontal, and a pastoral staff (see Catalogue, pp. 79-80). It was still more cheering to see in the catalogue a short bibliographical note (p. 79), for he seems to have been greatly neglected; nothing has apparently been published about him since the articles in the *Architectural Review* of 1897-98 (vols. iii-iv), apart from a few welcome pages in Basil Clarke's "Church builders of the nineteenth century," 1938 (pp. 194-6).

Sedding was a pioneer in the development of "Gothic," especially "late Gothic," architecture in the latter half of the last century, slightly preceding George Gilbert Scott, Junr., and a decade ahead of Leonard Stokes (St. Clare, Liverpool). His St. Clement, Boscombe, Bournemouth, either designed or finished in 1873 (evidence is inconclusive), was an astonishing innovation in several details, apparently anticipating G. G. Scott's St. Agnes, Kennington Park (1874-77—*The Builder*, July 18, July 7, respectively). Later in his life, and more accessible to Londoners, were St. Peter's, Ealing (c. 1893) and St. Augustine's, Highgate (c. 1896). His restorations of churches, chiefly in Cornwall, seem to have been sympathetic, and in his book *Gardencraft, Old and New* (1891 and reprints) he gave a compound word to the language (see Oxford English Dictionary). Henry Wilson (flourished c. 1893-96) finished some of Sedding's works; J.D.'s elder brother, Edmund, collaborated with him in his early days till his death in 1868, and a younger Edmund, who appears to

have been J.D.'s nephew, was probably the Edmund H. Sedding who wrote "Norman Architecture in Cornwall" (1909).

It should, of course, be borne in mind that George Frederick Bodley was one of the pioneers of that time, for in the same year, 1873, or earlier, he designed, and in that year there was started, his lovely church of St. Michael, Folkestone, and Pendlebury (St. Augustine) soon followed.

The manuscript of an unpublished article which I have prepared on all these men, with full details as far as discovered, has been accepted for deposit in the R.I.B.A. Library.

H. V. Molesworth Roberts.
Wallington, Surrey.

CHRISTMAS GIFTS

To the Editor of *The Builder*

Sir,—Is it not time the trade got together to put a stop to the infamous Christmas gift racket, which this year seems to have reached really serious proportions? I refer, of course, to the turkeys, whisky, cigarettes, theatre tickets and other forms of bribery with which both manufacturers and merchants are seeking to curry favour with their customers.

One of the minor blessings of the war was the virtual disappearance of this demoralising practice, which by 1939 had become widespread. Now, I regret to say, it is back with us, and shows signs of becoming more serious than ever before.

Let us clear our minds of cant and hypocrisy about it. There is nothing of the true Christmas spirit in the practice. It is nothing but an attempt to buy business with each supplier or builder trying to outbid the other.

As a director of one of the larger builders' merchants I am signing this letter under a nom-de-plume because the sentiments I express are purely personal, but I enclose my business card. I am, however, in a good position to know just how much embarrassment this whole subject can cause both to the giver as well as the recipient. Surely our trade organisations could agree to a recommendation to all their members condemning both the giving and the receiving of these spurious "gifts"? Ours is an honourable trade—let us keep it so.

"Disgusted."

"ENQUIRY" OR "INQUIRY"

To the Editor of *The Builder*

Sir,—I note in your issue of September 12, in your description of the new garage at Watford for the London Transport Executive, you show in the entrance hall an "Enquiries" window, and at the foot of the photograph is the caption "Public Inquiry Office."

The dictionary states that to "enquire" and to "inquire" is to "ask"; however, it is common to see either of these words used at counters or desks where the public seek advice, and I would like to hear from some of your readers as to which is the better practice, e.g., should we print on such signs "Enquiries" or "Inquiries?"

S. A. Broome,
Chief Planning Engineer (Buildings).
Department of Technical Education,
Broadway, Sydney, Australia.

AUSTRALIAN CHURCH BUILT IN ALUMINIUM

A CHURCH built entirely of aluminium units and believed to be the first church to be constructed throughout in aluminium was opened in Melbourne on October 26. From the start of site works to the consecration of the building, construction took just over seven months.

The church, which serves the small Roman Catholic parish of St. Cecilia's, in the South Camberwell suburb of Melbourne, was designed by the Bristol Aeroplane Co. (Weston), Ltd., and the Overseas Corporation (Australia), Ltd.

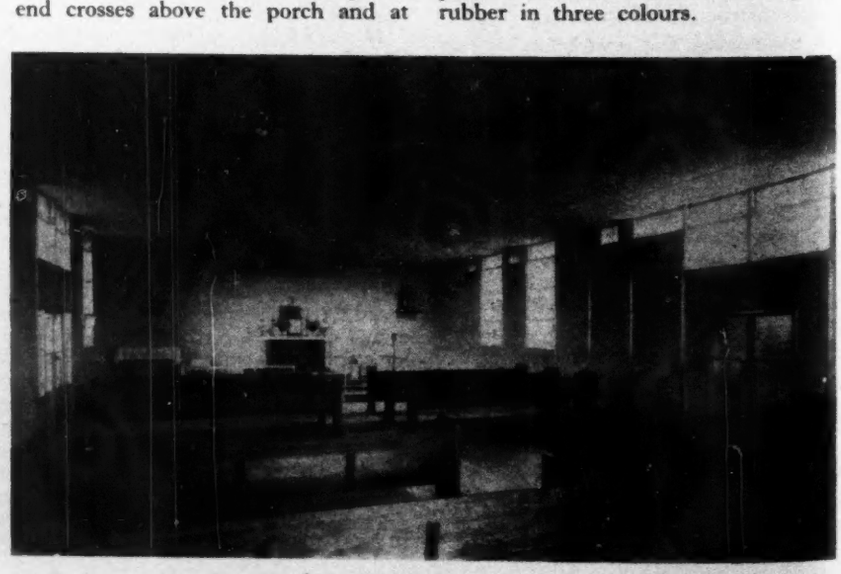
The building provides seating for 320 people and has a baptistry, porch and two sacristies. Overall dimensions of the main structure are 96 ft. 3 in. long by 32 ft. 3 in. in span.

Apart from the main structure of the church, many of the furnishings are of aluminium. The large gable-end crosses above the porch and at each end of the church were built in England. Of formed heavy-gauge aluminium sheet, they are finished in gold leaf, after special treatment with a zinc chromate undercoat.

The design of the aluminium furnishings, for which the contractors were The Bronze Window Frame Co. Pty., Ltd., of Oakleigh, has been kept simple in form, natural finish being retained wherever possible. Top rails and crosses, however, have an anodised gold finish.

The Baldachino is constructed mainly of aluminium sheet supported on aluminium extrusions. Its ceiling, which has a matt finish to avoid light reflection, is curved to improve acoustic qualities and to ventilate the immediate area over the altar.

The interior walls of the church are painted in dove grey and the ceiling in pale blue. The floor covering is rubber in three colours.



Coronation Decorations

SIR GILES SCOTT'S DESIGNS FOR THE CITY

THE City of London's street decorations for the Coronation, designed by Sir Giles Gilbert Scott and Son, have been made public. These are primarily to decorate the anticipated processional route on the occasion of the Queen's visit to the Guildhall on June 12—i.e., from the City Boundary at Temple Bar along Fleet street, Ludgate-hill, St. Paul's-churchyard, Cheapside and King-street, but will remain in place for the whole period of the ceremony and celebrations. Poultry to the Mansion House is also included, and other main thoroughfares may be decorated.

The schemes are of two main types—one for places where suspension across the street is feasible, and the other for blitzed areas, where only "flat" treatment parallel to the route is possible. The first incorporates a "hanging unit" at about 40- to 70-yard intervals, forming a series of triumphal arches, and is based on the City flag flanked by pennants and surmounted by a crown and inscribed scroll, connected by garlands to the adjoining buildings. From the Cathedral to the Guildhall these features will be supplemented by shields bearing the arms of the Livery Companies.

The second type consists of masts and pennants embodying the Union Jack, linked by garlands. Special features decorate the Griffin Monument at Temple Bar, Ludgate-circus and the Cathedral forecourt. Certain buildings, including four of the churches, will be floodlit.

Thus briefly to summarise the facts as released to the Press can hardly be expected to evoke a clear picture of Sir Giles Gilbert Scott's intentions, and must be supplemented by such personal impressions as could be gained from the scant material available for inspection at the City Engineer's offices. It is, of course, inevitable that these should be compared with the vivid and stimulating impressions conveyed at the Press conference conducted recently by Sir Hugh Casson, and mentioned in this paper, to introduce his scheme for Westminster, not only by one who attended both, but by the public at large when the time comes.

Caparisons, as surely Mrs. Malaprop has said, are odious. In any case, it would be misleading to try and assess the two schemes competitively, as there is hardly a valid basis for comparison other than the occasion to which they relate. Sir Giles has a quite different function of the celebrations to set off, and in a different "context" both architectural and emotional.

The result in each case becomes a matter of personal taste and preference, and the contrast between the "styles" of, say, a City and a West-End tailor irresistibly suggests itself—perhaps excusably, since a matter of "dress" is involved. It is perhaps safe—and fairest—to say that those who like the Westminster scheme will feel less enthusiastic about the City's, and *vice versa*. For there is a striking contrast not entirely to be explained by considerations of dressing for the place and occasion, to continue the sartorial analogy.

Like Sir Hugh, Sir Giles has no doubt studied carefully and sympathetically the architectural and social "flavour" of the places he has to decorate. He, however, has plumped for a more "overall" treatment of less variety than that of Sir Hugh for Westminster—probably rightly when the respective problems are examined. It remains to be seen whether the one may prove monotonous and the other jumpy by contrast, and whether each in their way will be equally successful and the contrast in fact complementary.

WHITE FABRICS

The most striking feature of the Scott scheme, of which the component elements are familiar and more conventional than the circumstances may altogether warrant, is the colour—or, strictly speaking, its absence. This is predominantly an unequivocal white, barely relieved by touches of red or blue and, of course, by the heraldic richness of the Guild emblems and by flags. It would be impertinent to question the wisdom of such a candid choice, and one can only applaud Sir Giles's courage and optimism about the weather. Perhaps memories of the recent fog are too vivid (if that is the right adjective !) and, after all, June traditionally "flames." But when one remembers that the decorations must survive the first three weeks of that month and observes what the City's atmosphere can do to its "features"—from St. Paul's stonework to city gents' collars—one suspects that Sir Giles will have his fingers crossed !

Even in the royalest of English weather, white, if used as a positive "colour," seems to require some quality or incidence of light not to be found inland. There is probably some scientific explanation, but to compare the white of a newly painted boat or Cornish cottage with that of a sash-frame or other "trim" in towns will illustrate the point. It is not just a question of dirt, one suspects, and even by contrast with grimed buildings the whiteness is not the same, but takes on a thin and watery look, suggesting the physical discomfort of snow patches in an otherwise dark locality. Does not everyone associate the word "snowstorm" with the precipitation of ticker-tape which a New York celebration prompts ? It is this that the scheme suggests. It must be confessed that the presentation does little to dispel this gloomy impression ; it leaves much to the imagination and, frankly, something to be desired as draughtsmanship. The use of white superimposed on dreary photographs of a wet Ludgate-hill, or on the foggy stipple background of a "blackline" print, may be intentional pessimism, but it cannot but chill the enthusiasm, and surely a faked blue sky would have helped.

But, given luck, the white keynote will sparkle and justify the bold choice. It is understood that materials for the decorations are still to be decided, and no doubt something will be found which *looks*, and stays, white—a colour of many shades, some reflective and some absorbent of light and all very dependent upon texture.

If much space has been devoted to the question here, it is because it is one on which the scheme will greatly depend. For the rest, the design of the decorations is handled with the sureness and discretion which is to be expected from such authorship. If there is perhaps less to pick out for mention, by the same token there will be less to provoke diehard criticism and invidious comparison between the Scott and the Casson schemes. Each will please some of the people all of the time—and they are people who will surely be anxious to be pleased, for once, when the time comes.

BASIL MARRIOTT.

OBITUARY

G. BLAIR IMRIE, M.B.E., R.W.A., F.R.I.B.A.

MR. GEORGE BLAIR IMRIE, whose death at the age of 67 was reported in our last issue, began his architectural career as a quantity surveyor pupil with Messrs. Ford, later joining the firm of Stoddart, Pine Coffin and Co., later becoming a partner. He was a member of the Society of Architects, becoming F.R.I.B.A. in 1925 when the Society amalgamated with the R.I.B.A. He was in partnership with the late T. G. Angell, and won the competition for the R.H.S. buildings at Wisley. After the 1914–18 war (in which he served as Major, R.E's, and was awarded the M.B.E.), he recommenced practice in partnership with Mr. Angell and Mr. H. H. Scott-Willey, F.R.I.B.A., specialising in domestic designs. He designed schemes at Clare Hill, Esher ; and Burwood Park, Byfleet ; and also an hospital and offices at Trinidad, B.W.I.

In 1945, Mr. Imrie was joined by Mr. T. McEwan Porter, A.R.I.B.A., and P. H. J. Wakefield, A.R.I.B.A. Housing schemes carried out were for Warminster and Westbury R.D.C. ; Westbury U.D.C. ; Bradford-on-Avon U.D.C. ; Clevedon U.D.C. ; Esher U.D.C. ; and Surbiton B.C. He was awarded M.O.H. Housing medals on three occasions. Mr. Imrie's work included some industrial and agricultural buildings and recently a school chapel. He was elected to the Royal West of England Academy in May last, and was a member of the Wilts and Dorset Society of Architects, and a keen supporter of the C.P.R.E.

Colonel F. S. Kennedy Shaw, C.B.E., writes in the course of a tribute : He will be remembered not only for the design of his buildings but also for his great love of the English countryside which ensured that any work of his was in keeping with its surroundings.

ARTHUR HARRISON, F.R.I.B.A.

WE REGRET to record the death at Norton, Stockton-on-Tees, of Mr. Arthur Harrison, F.R.I.B.A., F.R.I.C.S., who had practised as an architect at Stockton for many years. He was 79 years old and retired ten years ago.

AN ANNUAL JOURNAL

A NUMBER of interesting articles, some of them illustrated, as well as a great deal of useful technical information are contained in the third annual journal, recently issued, of the Truro branch of the Devon and Cornwall Architectural Society.

Among the illustrated articles are a description of the new extensions to Tehidy Sanatorium, Camborne, notes on the architecture of Truro Cathedral and St. Mary Magdalene Church, Launceston, Cornwall, and an account of a small and very attractive housing scheme on the Isles of Scilly.

LONDON BUILDING BY-LAWS

Changes Introduced on January 1

THE London Council has issued a statement setting out the new by-law requirements under the London Building Acts which came into force on January 1. The statement is as follows:—

A. London Building (Constructional) By-laws, 1952.—During the preparation of these by-laws, the Council agreed with certain objectors that some of their objections could be met by a note in an Explanatory Memorandum to be published in connection with (but not forming part of) the new by-laws. The matters which are specifically dealt with for the reason indicated are (1) rights of appeal to meet comment by the Institution of Structural Engineers and the London Chamber of Commerce; (2) pressure on ground—by-law 4.08—to meet objections on behalf of the District Surveyors' Association; (3) external pipes—by-laws 10.05 and 10.15—to meet comment by the Institution of Heating and Ventilating Engineers.

The opportunity has also been taken of including other explanatory matter such as references to the appropriate Codes of Practice, tables for determining the sizes of timbers without resorting to calculation and some paragraphs on Part IX—Fire-Resisting Construction As this is a new part of the by-laws it is considered that some guidance in the use of this part might be helpful.

Height and Cubic Extent

B. Principles Relating to Additional Cubical Extent and to Excess Height.—Although Section 20 of the London Building Acts (Amendment) Act, 1939, limits (a) the height of a building to 100 ft. or to 80 ft. if the area of the building exceeds 10,000 sq. ft., and (b) the cubical extent of a building, or division of a building, used for warehouse trade or manufacturing purposes, to 250,000 cu. ft., the Council is empowered to allow excess height or additional cubical extent and to attach to the consent terms conditions restricting the user or requiring the provision and maintenance of proper arrangements for lessening, so far as is reasonably practicable, danger from fire in the building. The Council may not withhold its consent to excess height if, having regard to the proposed use, proper arrangements will be made and maintained for lessening, so far as is reasonably practicable, danger from fire in the building.

The principles approved by the Council for the guidance of its officers in dealing with applications under this section have been amended to bring them into line with the new constructional by-laws, and are now published as a guide for architects and others.

Underground Garages

Included as appendices, and published for the first time, is the Council's Code of Practice relating to underground garages in cube buildings. Revised to conform with the rest of the new constructional by-laws, it is based on the recommendations of the joint committee of the Building Research Board of the Department of Scientific and Industrial Research and the Fire Offices' Committee.

It should be noted that explosion vents are not required in underground garages, reliance being placed upon a high standard of ventilation and upon other safeguards and controls.

The other main alterations are summarised below:—

(i) The new structural provisions do not, in the main, specify actual materials and thicknesses but state a time standard of fire-resistance to which the part of the building in question must be constructed. The materials and thickness necessary to obtain the required standard are ascertained by reference to the appropriate table in the by-laws. This gives a wider choice of materials and methods of construction.

(ii) It has been the practice to allow a steel access panel for plant to be fitted in the wall of a transformer room provided it be fixed shut with nuts and bolts, the normal access to the chamber being from the outside air. In cases where it is necessary for an emergency exit to deliver into the main building this will now be permitted by a portion of the plant access panel being hinged and arranged to open. This opening portion will be kept shut by triple-action bolts and made smoke-proof. It is not proposed that such a door shall be permitted into any part of the building used by the general public.

(iii) Window openings in spraying rooms have hitherto been required to be glazed with thin glass to serve as explosion vents. Experience has shown that with the other safeguards imposed, the risk of explosion is less than the risk of fire, and as the glazing of the windows of spraying rooms with fire-resisting glass restricts the spread of fire, fire-resisting glass will now be the normal requirement.

(iv) The requirements concerning celluloid stores have been amended to accord in general with the recommendations of the Report of the Committee on Celluloid Storage set up by the Home Secretary.

(v) Special consideration will be given to printing works, etc., where large fire cells are necessary to accommodate special machinery.

(vi) In buildings of additional cubical extent, caretakers' quarters and incidental offices will not be required to be completely separated from the remainder of the building.

(vii) Separating walls between lifts are no longer to be required.

It is pointed out that the publication in question must be distinguished from the code of practice which is to be issued shortly under the Petroleum (Regulation) Acts, 1928 and 1936, dealing with underground garages in cube buildings and lesser buildings.

The publications referred to can be obtained from the Record Keeper, County Hall, Westminster Bridge, S.E.1, or from any bookseller, or from Staples Press, Ltd., Mandeville Place, W.1, as follows:—

London Building (Constructional) By-laws, 1952 (Publication No. 3790). Price 3s. 6d.

Explanatory Memorandum on above (Publication No. 3796). Price 1s.

Principles for guidance on buildings of excess height or additional cubical extent (Publication No. 3795). Price 1s. 3d.

HOUSING PROGRESS REPORT

Figures for November

THE HOUSING SUMMARY presented to Parliament on January 5 as a White Paper* jointly by the Minister of Housing and Local Government and the Secretary of State for Scotland, shows that the number of permanent houses completed in Great Britain during November was 22,143 compared with 17,819 in November, 1951.

In the first 11 months of 1952, 216,527 permanent houses were completed compared with 175,509 in the same period of 1951.

* Cmd. 8728 Housing Summary, November 30, 1952. H.M.S.O., price 2d.

PLANNING OF LONDON

Architects' and Surveyors' Dinner

THE present methods of planning London were criticised by SIR GEOFFREY HUTCHINSON, Q.C., M.P., when he spoke at the annual dinner and dance of the London and Home Counties branch of the Incorporated Association of Architects and Surveyors, held at Park Lane Hotel, London, on January 2. Mr. C. Eric Side, F.I.A.S., A.R.I.C.S., presided.

Sir Geoffrey said that he had grave misgivings about the success of the present methods of the planning of London. It was no good trying to make up your mind what to do with every acre of land during the next 20 years, although he understood that the Minister of Housing had got to make a decision in more than 6,000 disputed cases during the next few months. Then he had to repeat the process in rather more cases in the county of Middlesex as well as the other 59 counties of England and Wales. These inquiries, he said, made a mockery of the Act of 1947. Did they really justify the time, energy and money which were being spent on them?

What was required, declared Sir Geoffrey, was an authority possessing the power, the imagination and the vision to give decisions in individual cases as they arose.

He did not believe that planning could be made to work upon the lines on which it was now being administered.

"The planners have bound themselves hand and foot in their own red tape," said Sir Geoffrey. "They are worse than lawyers. They have made so many rules for themselves that they are never free to decide anything upon its merits, or indeed to discern what merits it may or it may not possess."

Earlier, Sir Geoffrey referred to the "death" of the development charge. He said he was certain that the charge had prevented scores of homes from being built which might have accommodated hundreds who were to-day living in squalor and misery.

Of the system of building licensing, he said that its operation by the local authorities had been the means of preventing the building of many houses which private enterprise could have built without in any way interfering with the programmes of the local councils.

The local authorities had not had an easy task. But in the circumstances in which they had to work they had never been able to operate the system in such a manner as to secure the building of the greatest number of new houses. For a long time past the licensing system had been standing in the way of the construction of new homes.

Sir Geoffrey spoke also of the Accommodation Agencies Bill which he recently introduced in the House of Commons. He said that he hoped it would rid the public of a most undesirable type of agent. He estimated that in London alone these agencies had been collecting from the public more than £40,000 a year for which they had rendered no service whatever.

MR. ERIC SIDE, speaking in reply, referred to the continuous, steady growth of the Association and to its present progressive examination policy.

In a word of welcome to the guests, LIEUT.-COL. BERTRAM SHORE, F.I.A.A., L.R.I.B.A., said how greatly both the profession and the building industry appreciated the Minister's recent relaxation of the building licensing system, which now made it possible for private building to go ahead.

REBUILDING IN THE CITY OF LONDON

The Property Market, 1952

THE absence of rebuilding work in the City of London, despite the urgent need for accommodation there, is referred to in "The Property Market, 1952," a booklet which is being issued by Messrs. Chamberlain and Willows, surveyors and estate agents. The article states:—

"Large sections of the City destroyed by fire in 1940 still remain untouched and 12 years later there is not the sign of a new road to indicate the planning authorities' activity or intentions for the future. Business firms who a few years ago would have been willing to return, cannot be expected to retain their interest if the waiting period has to be measured in decades!

"The corporation having obtained confirmation of a comprehensive re-development plan with powers to acquire the land and control rebuilding, are, probably for financial reasons, tardy in implementing the programme. There are, to our knowledge, many owners who can obtain no help if they wish to rebuild, and many others who would willingly sell, yet still have to await the compulsory purchase of their sites.

"The City of London is regarded as the heart and pulse of commerce and industry, throughout the kingdom, the Empire, and the world, and it is tragic that no adequate efforts are made to shorten the period of deprivation of essential accommodation."

The article further comments:—

Industrial properties.—The necessity for increased industrial output to meet the demands of defence and export, has caused the strong demand for modern premises to remain, and high prices and rents are still obtainable for factories which can be speedily put into operation. Many industrialists have decided to remove their works to areas outside London, particularly to the new towns. Their existing premises in London suburbs have been readily saleable, although in cases where they are located contrary to town planning zoning, disposal by letting has been necessary.

Offices.—The keen demand for office accommodation in Central London continues unabated, and the scarcity has caused some firms to purchase and repair war-damaged structures. Generally, the older buildings without lifts and central heating are becoming out of favour and rents have passed their peak.

Sites for commercial buildings.—Although large projects are still deferred by the shortage of steel and the restriction of building licences, there has been more activity during the past year. Purchasers are now more optimistic of the prospects of development, and the removal of any uncertainties as to the imposition of development charge, has revitalised a spirit of enterprise.

Housing and building land.—The tendency to an easing of prices for houses with vacant possession has continued with a further reduction in price levels which has not yet become pronounced in the case of three- and four-bedroom modern houses. Contributing factors to this recession have been the accumulating numbers of houses in the market as a result of the slower rate of selling, increasing caution on the part of purchasers, and increased private building for sale to licence holders. It would seem that large-scale housing developments in the outer areas must await conditions permitting the considerable capital expenditure for road making, sewerage, main supply services and additional travel facilities.

Generally.—The effects of the revisions indicated by the White Paper have yet to reflect upon the market, but it is quite clear that the proposed abolition of development charges will simplify the disposal of premises, particularly in cases where the proposed use varies.

L.C.C. OUT-COUNTY DEVELOPMENT

5,000 Houses to be Built at Ashford, Kent

NEGOTIATIONS between representatives of the London County Council and Ashford, Kent, Urban District Council on proposals for making the best possible use of new powers given by the Town Development Act, 1952, have now reached the stage of agreement in broad principle, the L.C.C. announces. A scheme is being prepared which will meet Ashford's needs and desires for expansion; it will be the first of a number of agreements which the L.C.C. hopes to make with out-county local authorities to help solve the most difficult and fundamental problem of the County of London—namely, rehousing outside the county over 300,000 people during the next 20 years, in New Towns, expanded towns, or elsewhere where they can have not only their homes but also their employment.

Since July 29, 1952, when the L.C.C., in anticipation of the Town Development Bill being enacted, authorised agreements to be sought within the framework of its provisions, the statement continues, the chairman of the housing committee and other members and officers of the L.C.C. have been in active consultation with many out-county authorities and some 40 towns have been visited. The negotiations with Ashford U.D.C. are the first to reach a stage when proposals can be submitted to the committees of the two authorities concerned and, subject to their approval, be worked out in detail and discussed with the Ministry of Housing and Local Government.

Several courses of action are open to the L.C.C. and the Ashford U.D.C. under the Town Development Act, 1952, but the one proposed as being in the best interests of both authorities is that the L.C.C. should be the U.D.C.'s agent in carrying out the development, which, for the purpose of working out estimates of costs, envisages the building of some 5,000 houses over a period of 10 years. These would provide for rehousing families on the U.D.C.'s waiting list, but the majority would be available for families on the L.C.C.'s list from all parts of the County of London.

A key problem in the expansion will be to secure the movement of industry from London so that work and houses are provided concurrently.

On the proposed agency basis, the L.C.C.'s extensive housing organisation and technical resources would be available to carry out all the new housing development in Ashford, the cost of which would be repaid by Ashford U.D.C., which would be the owner of the houses, receive the rents and be responsible for management and maintenance.

The outline scheme has been approved by the planning committee of the Ashford Council and will be considered by the L.C.C.'s committees concerned in the near future.

BUILDING LICENSING

Financial Limits for Unlicensed Work

THE Minister of Housing and Local Government, in Circular No. 95/52, dated December 31 last, refers to circular 59/52 of July 18 last, and invites the attention of local authorities to the Control of Building Operations (No. 18) Order (S.I.1952 No. 2111), which prescribes for the calendar year January 1, 1953, to December 31, 1953, the financial limits within which building and civil engineering work may be done without a licence. The effect of the Order is that during the calendar year January 1, 1953, to December 31, 1953, such work may be done without a licence on any single property if its cost, together with the cost of any previous work carried out on the property without a licence in the period, does not exceed £500 or, in the case of certain special classes of buildings, known as "designated buildings," £2,000. The limit for authorised works remains unchanged. Local authorities will note that the period for the purposes of the financial limits is changed to the calendar year instead of, as hitherto, running from July 1 to June 30.

The definition of "designated buildings," which may briefly be described as industrial and agricultural buildings, is unchanged. The term "industrial buildings" means, generally speaking, factories and workshops. It does not include commercial premises, shops, banks, offices, warehouses and the like. "Agricultural buildings" include all farm buildings except the farmhouse and the farm workers' cottages.

When announcing the new free limits, the Minister of Works said that he proposed to discuss with the Associations of Local Authorities how full advantage could be taken of the savings in administration which these changes make possible. This discussion is being arranged and local authorities will be advised of the outcome.

Controlled Materials

The purposes for which housing authorities issue I.S. Authorisations, as set out in paragraph 4 of circular 59/51, are not affected by the alteration in the "free limit." The Principal Regional Officer continues to be responsible for issuing timber licences for both licensable and "free limit" work.

LICENCE-FREE HOUSING

Government's Decision "Unwise and Retrograde"

ALD. H. E. LANE, chairman of the Wolverhampton housing committee, at a recent meeting of the Town Council described as "unwise and retrograde" the Government's decision to issue without limitation licences to build houses up to 1,000 sq. ft.

He argued that the Government's decision disregarded the question of need and it did not seem right to give licences to people who were already living in decent houses. The houses they would vacate would be available for sale and not to let. Ald. Lane said that there was a shortage of bricks and this was likely to be aggravated by this decision and the available material should be used to house those in greatest need.

Supporters of the Government's decision thought that the number of houses built to let during the past 12 months had been greater than at any time since the war and that the granting of licences would not effect the progress being made in building houses for letting.

"GRANITE CITY"

A Planning Report on Aberdeen

Reviewed by H. V. LANCHESTER, Hon.Litt.D., F.R.I.B.A., P.P.T.P.I.

"GRANITE City," a synonym for Aberdeen, is the title of an outstanding* book produced by Mr. W. Dobson Chapman and Mr. Charles F. Riley on the present and future of this important city of 185,000 inhabitants. Owing to various circumstances, which will appear as we proceed, Aberdeen seems less in need of the Town Planners' attention than most other towns, but the authors of this book have nevertheless discovered many sociological and industrial aspects in which it would benefit by improvements such as they indicate.

The site of Aberdeen has from early times been provided on a liberal scale; it is on what might be regarded as a peninsula lying between the river Don on the north and the Dee on the south; these rivers run from the Cairngorm hills eastward to the North Sea about three miles apart, and the coastal fisheries and land adjoining to a depth of between two and three miles has always been allotted to Aberdeen; the present municipal area being about 5,800 acres.

The First City

The first city, known to the Romans as Devana and to the Norsemen as Apardion, seems to be the origin of the mediæval Aberdonia Vetus with its market place, a mint, its twelfth-century Cathedral of St. Machar, and its college (founded 1494). Most of this town was probably built of wood from the near-by forests, it was several times raided and burnt during that disturbed period; its site was on the south bank of the Don, more or less that now assigned to the University around the Cathedral some two miles to the north of the present city centre.

Although considerable space is given to the history of the city, the foundation of new Aberdeen is not made by any means clear. At one point it is suggested that it was started after the destruction of old Aberdonia, but this is not confirmed by Gordon's map of 1661, which shows two towns quite separate from each other and almost equal in size. It seems more probable that new Aberdeen arose from a gradual expansion in scale of the fisheries and other maritime interests which made the broad estuary of the Dee a more appropriate harbour than the relatively narrow Don and, therefore, encouraged an industrial settlement to the south which in the 18th and 19th centuries outgrew and enveloped the old city.

Exploitation of the Quarries

Perhaps, to the builder, the next interesting phase was the better understanding of the working of granite and the resulting exploitation of the quarries to the west of the city area. There was a considerable export of road setts and other road-making material, and the value of this export was enhanced when, in 1830, a method of polishing granite was worked out and the products of this were in demand in the south and abroad. Increasing trade required the improvement of the Dee harbour and a new pier was built by John Smeaton in 1780, and then the Abercromby Jetty in 1789. Under Telford's advice, in 1816 the north pier had been extended about 900 ft. seaward and a breakwater 600 ft. long constructed on the south side of the harbour entrance.

Probably the most striking difference in the effect on the city itself resulted from improvements in quarrying which facilitated the use of granite as ashlar instead of rubble as in earlier times. No one was more successful in handling this than Archibald Simpson, whose building groups are extremely good essays in design dating from the first half of the nineteenth century. It is to be regretted that some of the designs of Sinclair and his confrères were injuriously affected by later alterations and that their quiet dignity was not maintained in work of the latter part of the nineteenth century. To return to the eighteenth it is also unfortunate for the city that, probably, owing to the disturbed state of Scotland the Aberdonian architect James Gibbs transferred his activities to London where he made his reputation with the churches of St. Mary-le-Strand and St. Martin-in-the-Fields.

Aberdeen owes its steady expansion mainly to the industry and resourcefulness of its citizens; paper mills were first supplied by local soft wood and then by import from Scandinavia. Textiles were added, and a good example of adaptability was the shipbuilders' start in 1830 of the large sailing freighters which could make a speed of 15 knots and secured the tea trade with voyages encircling the globe. When the Suez Canal cut into this demand the shipyards were turned over to building trawlers and tugs, still maintaining their activity. The reputation achieved in these directions extended to the craftsmen of Aberdeen and secured for them a good reception in other areas including the U.S.A.; a case in point being the granite industry of Vermont originally started with a group of Aberdonian craftsmen.

Future Development

The close attention that has been given to the improvement of Aberdeen during nearly two centuries tends to give the impression that the attractive development programme offered by the authors of this work might be somewhat in excess of the strictly economic demands; at the same time, such great pains have been taken to justify the various proposals in detail that these may deserve careful attention with a view to their adoption in whole or in part.

Congested traffic in the commercial centre suggests some improvements in the road plan. It is proposed that the overloaded wharf on the northern side of the harbour should be double decked, and the most notable development scheme by the authors of this book is the planning of a housing and industrial suburb on the area referred to as "The Tullos Site," practically vacant ground south of the Dee estuary. This is particularly suitable for an expansion in relief of the central industrial area as it has access to the harbour and railway facilities. The planning is interesting and in accordance with modern principles.

* "Granite City," a plan for Aberdeen. By W. Dobson Chapman and Charles F. Riley (London: B. T. Batsford Ltd.). Price £2 2s.

An 150th Anniversary Competition

A large number of entries has been received for the decorating competition organised by Messrs. Thos. Parsons and Sons, Ltd., as part of their 150th anniversary celebrations. We hear that the work generally is of a very high standard. The entries will be exhibited at 70, Grosvenor-street, New Bond-street, W.1, from January 12 until January 30 (10 a.m. until 5 p.m., from Monday to Friday).

R.I.B.A.

Notes from Council Minutes

FOLLOWING are notes from the minutes of the R.I.B.A. Council meeting of December 9:—

ADDRESS BY THE MINISTER OF HOUSING: Before the Council proceeded to the business of the meeting, a short and informal talk was given by the Right Hon. Harold Macmillan, M.P., Minister of Housing and Local Government, on the work of his Ministry.

KING GEORGE VI MEMORIAL FUND: The Council sent a donation, on behalf of the Royal Institute, of 250 guineas to the King George VI Memorial Fund, to be used as a contribution towards the cost of the architectural work involved in the provision of a permanent memorial.

APPOINTMENTS (*a*) *Ministry of Works Advisory Council on Building Research and Development — R.I.B.A. Representatives:* The following have been appointed by the Minister of Works on the nomination of the Royal Institute: Sir Lancelot Keay, K.B.E., P.P.R.I.B.A., Michael Waterhouse, M.C., P.P.R.I.B.A., and Robert H. Matthew, C.B.E., A.R.I.B.A.

(*b*) *R.I.B.A. Architecture Bronze Medal: the Devon and Cornwall Architectural Society; Appointment of R.I.B.A. Representative on Jury*: R. H. Brentnall, M.B.E. (A).

(*c*) *Code of Practice for Installation of Butane-burning Gas Appliances; R.I.B.A. Representation on Drafting Committee:* George Fairweather (F).

DIRECT ELECTION TO THE FELLOWSHIP: On the recommendation of the Royal Australian Institute of Architects the following Past Presidents of the Western Australian Chapter, R.A.I.A., were elected to the Fellowship under the provisions of the Supplemental Charter of 1925, Section IV, Clause 4:—A. D. Cameron, A. E. Clare, K. C. Duncan, E. Le B. Henderson, R. Summerhayes, and A. B. Winning (L).

R.I.B.A. STANDARD FORM OF CONTRACT: The Secretary reported that the Royal Institution of Chartered Surveyors had accepted with pleasure the invitation jointly issued by the Royal Institute and the National Federation of Building Trades Employers to add their endorsement to the R.I.B.A. Standard Form of Contract.

THE DEVON AND CORNWALL ARCHITECTURAL SOCIETY: Formal approval was given to amendments to the rules of the Devon and Cornwall Architectural Society involving, *inter alia*, the change of title of the Society to "The Devon and Cornwall Society of Architects."

OVERSEAS STUDENTS — CONTRIBUTIONS: The Council approved a recommendation of the Finance and House Committee that as from January 1, 1953, any overseas student newly enrolling should be required to pay the normal annual contribution of £1 11s. 6d. The concession previously in effect remitting this contribution to overseas students for the first five years of their studentship will not be withdrawn from those already receiving the concession.

Diaries and Calendars

We gratefully acknowledge receipt of diaries and calendars from the following: The Kynoch Press; Messrs. Holland & Hannen and Cubitts; Zinc Alloy Rust-Proofing Co., Ltd.; and St. John's Timber Co., Ltd.

Planning: Need for a National Outlook

PROFESSOR GORDON STEPHENSON'S PAPER AT THE NATIONAL HOUSING AND PLANNING CONFERENCE

"Planning" was the simple title chosen by PROFESSOR GORDON STEPHENSON, *B.Arch (Liverpool), F.R.I.B.A., M.C.P., M.T.P.I., Lever Professor of Civic Design at Liverpool University, at the National Housing and Planning Conference and Exhibition, held last autumn at Southport, which we reproduce below.*

A SIMPLE view of things would suggest that we are divided into two camps. Some are for planning; some against. In a discussion on international affairs our old friend, the colonel from Poona, will become apoplectic at the idea of a N.A.T.O.; and the retired gentleman, who has been sitting in his well-worn club chair dreaming of Edwardian times, will almost have a stroke when somebody within earshot mentions the Colombo Plan or the International Bank for Reconstruction and Development. They object to collective action even though governments may decide it is the only way to solve defence, monetary, or other problems. Collective action implies planning. In home affairs we are inclined to confuse planning with its by-product—control; and we hate being controlled, especially if we are asked to do something in a way which seems unreasonable. Our own plans have to be altered or scrapped for the sake of some other. There's the rub; and most annoying it is if the private plans were capable of being carried out as prepared. The public and private plans are in conflict, or so we are told by an official who may or may not have explained why. Conflicts of this kind will go on for many a year. May they get fewer and fewer as general understanding grows and public administration improves.

There is little fuss about an all-embracing decision which is made for an obvious purpose. Grumbling is a privilege we cherish, and we indulge in it when told that only £25 may be spent on a holiday abroad, as part of a plan to husband a foreign exchange. But we accept the decision with relatively good grace because the reason behind it is understood. It is another matter to be told that we cannot have a modern window for the living-room as it would "damage the general amenity of the neighbourhood"; or that grandmother, living alone, cannot have her house sub-divided into two small flats (the top one for Mrs. Smith, also a widow), even though the simple job would release a house for a family and satisfy two others. Knowledge of Town and Country Planning comes to most people in this way. They may have heard talk of some plan the local authority is preparing—with densities, ring roads, overspill and other mysterious and remote things in it. But, after all, you learn to take them with a grain of salt. Nothing much seems to happen except on the edge of town where *they* are buying three farms for a new housing estate, which will be a long bus ride from shops and factories.

Town Planning is a game of "make-believe" until you make contact with it. Then you have to fill in a lot of forms, have drawings made, and wait for somebody to tell you whether your own plan, pondered carefully and for so long, meets with the approval of a committee which deals with such things. If it is a house you want, and you have saved all your working life to have one built according to your own very modest ideas, it is the devil of a job to get anything done. First, you will have to find a plot of land and that is not easy. You can search only in the areas coloured on the map, and they are practically all owned by the local authority or some speculating builders who are waiting for the sun to shine again. If you do find a plot you really will get involved in form filling, and with a land board which is going to "tax" you heavily, a licensing authority, a planning and building bye-law authority, with lawyers and builders and, perhaps, with an architect. By the time you have finished you will be mortgaged, disillusioned, and disheartened. You will have decided that initiative and enterprise do not pay.

HOUSING "KINGDOMS"

You could, perhaps, have tried another plan. Nearly all the housebuilding is for the local authority. Your name should have been on the "list," and it would have been highly placed if your family had been living in "over-crowded" conditions. Council houses are generally well designed and built. They are for rent, and you, together with the great majority of people, prefer to pay rent rather than to buy, so that it is easier to move to another job elsewhere when the opportunity comes. Besides, you pay only half, or less than half, of the real rent of a council house. The taxpayer and the ratepayer (you and everybody else, of course) pay the rest. This is one conception of planning. Political, social, or economic planning—whichever you like to call it. There is only one snag. If you are a man of enterprise and initiative, and you improve your knowledge and skill, and you should move to a more important job in the national as well as your own interest, you cannot move to another house in another area. Only local residents with priority can have houses there. You will have to buy a house at an inflated price, or wait for several years, preferably in "over-crowded" conditions, to get priority. There is a Ministry of Housing, but there are hundreds of housing kingdoms. Cross the border from one to another and you are a stranger without housing rights.

In the old days the speculating builder knew no boundaries. To put it kindly, he was at your service all over the country. He may, of course, come back in force (I doubt it and I hope not). He was ubiquitous and he served all-comers who had a small deposit. But, in general, he sold a shoddy product and, because

Professor Gordon Stephenson.

of his ability to sprawl "sham Tudor" villas across farmland, he more than anyone encouraged the establishment of the present planning system. This is a long story and others have told it well. It is sufficient to say that the origins of contemporary town and country planning are in the public health movement of the nineteenth century. The first steps taken were to control the speculating builder through bye-laws. Between the wars the damage he was causing was not to health—if we rule out fatigue brought on by ever-increasing journeys to work. It was to the economy and the appearance of town and country. He was not the only offender and he cannot now be the main culprit. The large-scale developers of to-day are local authorities, Government departments, public corporations, industrialists, and big commercial institutions. The speculating builder and the small man with enterprise and initiative are under "control."

THE WIDER MEANING

But planning is, surely, something more than "control." We all make plans, large and small, to do things. The housewife plans a meal; the enterprising industrialist plans a new and more efficient layout for his production line. Both have to study the likes and dislikes of others and consult them. Both have to work within a budget. Here is the essence of planning whether it be on the international, national, or local level. It is a way of doing things; of using foresight; of deciding what you can afford to do to obtain the best results within the immediate and the foreseeable future. It is sensible that Government and local government should plan; there is nothing new in it. What is new is the mountain of acts, rules, regulations, and orders on such subjects as town and country planning. "Reason is the life of the law," but one often has occasion to think that Montaigne, in the sixteenth century,

was right when he said, "it would be better to have no laws at all than to have them in so prodigious numbers as we have." What would he have said if he had lived to-day? A simplification of the many laws of "control" is overdue. It is now most difficult to see the planning wood for the legal trees. We ought, perhaps, to attempt a redefinition of objectives and, having them in mind, look at methods at present employed in town and country planning or, as I prefer to call it, civic design.

PLANNING OBJECTIVES

The principal objective of civic design should be the more efficient, more economical, and more seemly development of town and country. Sometimes one is forced to wonder if this is realised by many committees and councils. Design, in its wider sense, means purpose, aim, or intention. If we couple it with the adjective civic, it is the purpose, aim, or intention of citizens, and we express quite fully why planning should be dynamic and exciting; why it should be intelligible; why it should be continuously debated when elected representatives and other groups meet. Planning comprises a series of related decisions which should give a sense of direction as well as objectives. It must also give tangible and meaningful shape to all building activities. It must encourage economic and social efficiency and, in so doing, give delight. It is not a hole in a corner business to be discussed in secret. When it is, "control" without explanation follows, and it is a frustrating imposition. Neither is planning a mysterious science or art for the highly qualified alone. It is bound to influence our way of living; therefore, everybody must participate. This is not to say that highly qualified people are unnecessary. Far from it. They are more than ever necessary, as the Schuster Committee has so strongly pointed out, if we are to give full purpose and sense to an essential process.

A committee cannot carry out intricate calculations and operational design, but it can and must concern itself with policy. In order to establish it, objective views must be considered—views which are not often expressed in the heat of political battle. Facts should be ascertained and methodically assessed. Given carefully weighed evidence, it should be possible to establish a sensible and realistic programme for development. Within such a framework the public or private developer, through his architect and engineer, can make finer and more economical designs, with the particular scheme as part of a well-considered whole.

DEVELOPMENT PLANS

You may well ask if satisfactory programmes are emerging from the 1947 Town and Country Planning Act. My view is that they are there in dim outline. With a little extra effort we may make them more precise. It will mean, to begin with, that we should concentrate more on main objectives and forget side issues; that we should get to grips with fundamental problems; that the Government should take proper stock of the economic position, indicate what is needed in the national interest, and endeavour to encourage the flow of building labour and materials to areas where they are most vitally required in the battle for economic regeneration—the only hope for improved standards of life. For some years now Governments have been telling us what we can't do *ad nauseam*. This is a depressing and miserable habit. If one would only explain carefully the economic facts of life and establish a national development programme we should have something to work for instead of against; and, I believe we should be more wholehearted and courageous in many of our actions; and what is perhaps of equal importance, fired with a spirit of cheerful determination. You have only to think back to the war years to feel quite certain that we have more in us than the "moaners" would have us believe.

In one very important respect, the present Minister of Planning (who works under a *nom-de-plume*) is essentially right. He has introduced a cheerful note. That it should be a note about one subject only is to be regretted, and the more so since we can pay for housing only with what we earn. It is more than doubtful if we are earning enough to justify a greatly increased housebuilding figure.

DEVELOPMENT POLICY

Our main energies and great efforts must be directed towards achieving solvency, and even more than that, for improvements in our standard of living can only come from constantly increasing productivity. Without it an exaggerated housing programme can only be carried through at the expense of other things, including our food supply, industrial expansion, and the many millions of existing houses which are in varying stages of decay. A balance must be achieved between new housing and the maintenance of old housing within a development framework seen as a whole and in relation to the national economy.

It should not be necessary here to make arguments for planning and wise development. If we could do without it we could do without Government. It might be argued that we could do without town and country planning, but we should leave that argument for other places and other occasions. It is sufficient to say that all our main political parties have agreed that it is necessary, we have compendious legislation on the statute book, and the counties and county boroughs have completed or are completing development plans. For the first time we are getting a picture of the nation's resources and an idea of what it is possible to achieve in the next 20 years. Moreover, the weaknesses of our economy, the deterioration of some areas, and the growth of some others at their expense, are being revealed. Background information for the formulation of a sensible development policy is rapidly becoming more complete.

I should like to make a few suggestions about matters which should be taken into account and, at the risk of being torn to pieces, I am going to develop the argument that we should have more planning at certain levels and less at others. That we should have more balanced and positive action by elected representatives in high and low places, and less "control" by paper-consuming committees and their officers, who can never hope to know why individuals and small organisations make many of their decisions. I want to start by examining the present position.

For many years this country has been living beyond its means. I accept the view that this is not primarily the result of the two world wars but due rather to our failure to adjust ourselves to world conditions which have been rapidly changing. The industrial revolution was born in these islands. We became the great creditor nation. Emigrants from these shores went to all the continents. We made capital investments in primary production in all parts of the world. Our imports of food and raw materials were paid for by the earnings of those investments and by our exports of manufactured goods.

Our position to-day is far less satisfactory. There is a seemingly insatiable world demand for primary products, particularly food, a demand which must increase as hundreds of millions of people throughout the world raise their standards to subsistence level or above. In such a process lies one of the main ways to more peaceful world conditions. This is a matter of morality as well as one of political, economic and social stability. We may buy primary products only by selling our own goods and services, and competition is keen. We cannot live at the expense of other peoples. We must pay our way, set our own house in order, and put first things first.

Our assets are numerous; their potentialities great. First and, perhaps, foremost we are resourceful and vigorous, with skill and experience. Secondly, we are politically mature and we are able to debate great and small issues in many places and gradually (too gradually, some might complain) come to conclusions which lead to action. Such was the process which led to our charging a Minister with the duty of "securing consistency and continuity in the framing of a national policy with respect to the use and development of land throughout England and Wales." He happened to be a Conservative Minister and his counterpart, charged with similar duties in Scotland, was a Labour Minister. Thirdly, our material resources are much more considerable than we sometimes suppose. We have some of the finest and best farmed agricultural land in the world and, together with the other land, it could be made more productive. It was once remarked that we live over a great coalfield. Next to land, Britain's coal deposits are her most important primary asset; and, next to food, fuel (or power) is the basic requirement of our civilisation. We must substantially increase the supply of both. Finally, our capital equipment is huge in size and a most important asset. There are great and small industrial undertakings: some with the most modern equipment and buildings; some relatively satisfactory; some obsolescent. Some must be expanded at all possible speed; some will inevitably decline; and new ones must be created in accordance with

a well-reasoned industrial strategy. Nothing must be allowed to hold up the further production of those goods, in the manufacture of which we excel and for which there are likely to be willing buyers in other countries. In an environment with "control" barriers at every corner, the building up of great industries from the inventions of a Baird or a Whittle, or even lesser men, is going to be an unnecessarily difficult and sometimes impossible process. In public as well as private affairs we want enterprise. And "enterprise" is the key word, not "public" or "private."

Finally, I want to mention a most important capital asset which causes us great concern, our 14,000,000 dwellings. In terms of dwelling space we are the best housed people in the world. The recent census, and the surveys which have preceded the making of the development plans, show that our stock of dwellings, new, middle-aged and old, gives, on a statistical count, well over one room per person. Yet, a little under one person per room is supposed to be the housing objective. If you look at the Housing Manuals, dwellings are carefully labelled according to the number of persons who are supposed to live in each type. The standard is roughly one person per room. Yet we are in grave danger of imposing an unbearable strain on the economy of the country in order to produce vast numbers of new houses on new land and, in addition, whenever we rebuild on old land, we do so in an unnecessarily extravagant way. How has this come about? What fresh thinking is needed if we are to put housing properly into the economic framework and yet deal in a human way with the many families who are still living in uncomfortable and even horrible conditions? I shall make an attempt, however poor, to offer a few suggestions later. I shall try to look at housing within the pattern of the local planning authorities' surveys and development plans, and at the same time try to see it as part of a national investment programme.

A NATIONAL INVESTMENT PROGRAMME

The development plans are a broad expression of the intentions of the planning authorities and guides to day-to-day administration. They are fairly realistic in the sense that they show how much development may be anticipated in the next 20 years if, broadly speaking, present-day local resources are used. They are also realistic in the sense that they are allowing for a population which is very little more than the Registrar General's estimate of what it might be 20 years hence. Their weakness, now being revealed, is that they are local and could easily be upset by changes in national economic policy. Changes which might in fact be demanded as a result of a Governmental review of the plans. For example, in the critical industrial areas of South Lancashire and the West Riding of Yorkshire the building industry is seriously undermanned, and these are areas where one would expect much new capital investment in industry as well as great efforts to replace obsolete and obsolescent housing. On the contrary, the London region is likely to have a relatively overmanned building industry and the plans would allow a considerable industrial extension (particularly in the New Towns and expanded towns), as no method for stopping the replacement of one industry by another in the built-up areas has yet been devised. A less obvious but more insidious form of expansion is anticipated (and will probably take place unless the Government steps in to protect the national interest) in commercial areas which are heavily overprovided.

It must be evident by now, in these days of expanding Central Government and the development of bigger (but not necessarily better) public and private businesses, that office building might proceed apace in the London area and relatively little take place in other parts of the country. We should pay dearly for this, not only in terms of a continuing drain of skilled building workers from the provinces, but also in terms of a continuing flow of executive and clerical workers destined to spend the equivalent of a quarter of their working life strap-hanging. And perhaps, most important of all, half the wealth of the country would be going into the ever-spreading and ever-congealing wen, where movement is getting slower and slower and costs steadily rise. For a long time costs have been up so that salaries and wages are higher, housing subsidies higher, and now a new, confusing, principle has been established of subsidising a transport system which is bound to become more and more expensive to operate. How long are we to go on paying lip service to the purgative virtues of economic forces whilst, at the same time, taking evasive action whenever these forces make their presence felt?

The intentions of Governments are expressed; the Barlow Plan has been accepted; decentralisation is agreed in principle. But poor efforts are made to carry them into effect. The New Towns Act is, in large part, going to result in additional Government-financed capital expenditure in the London region and the Town Development Act may lead to the same result. Nothing short of a National Resources Development Programme can bring about a real redeployment of the building industry so that it is best used in the national interest. I would even go one step further, in the long run we shall not solve our economic problems, and consequently decentralisation problems, without taking part in a Commonwealth Development Programme. Once we are solvent it would pay us handsomely to invest considerable capital in primary and other industries in the Commonwealth and, in relation to it, work out a migration policy with Canada, Australia and New Zealand.

In the Book of Job (ch. xxxvii, 22) it is written that "Fair weather cometh out of the north." If we are going to have fair economic weather the sun must first shine in the north (which for the purpose of this paper I am going to define as including parts of Scotland and Wales, the Midlands, counties containing good agricultural land, and the de Havilland factory at Hatfield!). In the north we must produce an extra 50,000,000 tons of coal a year, increase agricultural production, expand the basic industries and the permanently valuable exporting industries. All this means capital investment on a greater scale and new houses must be strategically located to aid the expansion, and not placed where a house-building labour force happens to be. In an expansion programme the total of new houses could not, perhaps, be greater than 200,000 per year, though in key places (e.g., in mining and iron and steel areas) houses must be built on a relatively greater scale than hitherto. The proportion of the building labour force on new industrial building work must be increased. Such a programme would cut across local government boundaries, particularly when it dealt with housing.

FLEXIBILITY LACKING

There has not been sufficient flexibility in house-building since the war. We have come to recognise that boundaries are meaningless in the areas of greatest industrial concentration, yet each local authority has attempted to solve its own problems; subsidies have risen to great heights and so have housing lists. Much first-class agricultural land has been lost because of the tremendous local pressure on land contiguous to existing built-up areas. A vast existing stock of houses has been neglected to such an extent that the losses in terms of capital must be appalling in dimension. Apart from the City of Birmingham, not one of the larger local authorities appears to have been concerned with the great inner areas which are now decaying and cannot possibly be replaced, on any count, within the next 20 or 30 years. The development plans have shown this. In fact, they have shown that in some northern industrial towns of importance a high degree of necessary factory building, a high degree of obsolescence in housing, and the present low supply of building labour will give them a worse housing position in 1971 than their present position. Are we to plan worse places in which to live? What a travesty of planning this would be.

In order to hold our social and cultural gains I am in favour of a national development policy. In order to improve our standard of living such a policy, expressed in a broad and flexible plan, is vitally necessary. The Government's capital investment programme must be conditioned by such a policy and, furthermore, determine the application of the investment, instead of being a compromise between the conflicting claims of Departments, each of which is looking at things as they are, instead of what they might be or should be. It is doubtful if the building industry should be expanded. Such an expansion would imply an increased flow of labour and materials to the supplying industries with a consequent diversion of coal, other materials and labour at the expense of vital sectors on the economic front. An inadequate supply of materials has, up to now, been mainly responsible for low productivity in the building industry.

The Ministry of Housing and Local Government, in coming to conclusions about development plans, must make itself fully aware of the economic implications in its appraisals. It must, for

example, ask itself if it makes national economic and social sense that some towns in which new and important industries are being built should plan for an increasing obsolescence in housing; and whether it makes sense for the Government to arrange for subsidies of over £2,000 per small flat in multi-storey blocks in London, when three-bedroom houses whose *total* cost is only two-thirds of such a subsidy are being built in insufficient numbers in areas which may be more vital to the national economy. It must consider ways and means of redeploying the building industry. It must either revise the Rent Restriction Acts and require landlords to maintain and improve millions of houses, or encourage local authorities to take over great areas as Birmingham started to do. It should look again at subsidy arrangements. It should use subsidies, perhaps on a reduced total scale, as a means of getting the right development in the right place at the right time. It might find it would make social as well as economic sense. Finally, it should try to assess where the new and developing housing policy might lead us. Will it take us back to the position of the 1930s modified only by the fact that there are development plans? Will it mean that the speculating builder will pull building labour away from critical to less important areas? Will an increasing number of houses offered for sale mean that people are going to be more tied to places and less mobile, as they have been during the past seven years when local authorities built the great majority of houses? Will the Town Development Act result in complicated statistical exercises, the counting of heads, bargaining, endless committees, uneasy compromises and, in the end, nothing more than extensions of the conurbations with additional expense to the Treasury? Have other house-building agencies been considered; for example, regional housing associations or housing co-operatives, which could build houses for rent where they are most urgently required and disregard boundary complications? There is some hard thinking to do.

Local planning authorities have their plans. All local authorities are becoming more aware of their problems as a whole. They are probably most acute in the urban areas and some of them may seem impossible of solution. This is all the more reason for new thinking, for greater co-operation with the Government and other local governments. It is certainly time for greater precision and speedier action in important matters, and for every encouragement to be given to departmental enterprise and private enterprise in a thousand and one minor matters. All the emphasis should be on the stimulation of initiative and the devolution of responsibilities. In the immediate past a few people have been hag-ridden by responsibility; too many content to sit and "control" or to be "controlled." Local authorities have been haunted by housing lists and driven largely by Government policy to think almost entirely in terms of new houses on new land. This may have been right in the early post-war years, but is it right now? Is it not time to look at towns as a whole; to arrest the decay which is spreading like a virus through the inner areas while new life comes into being only in distant fields? If the loss of buildings in the inner areas is causing serious alarm what of the people? Is it fair that they should live in growing squalor? They are helping to pay for new housing, yet it is let at rents beyond the means of some. Is it not time for local authorities to concern themselves with blight and slums? To pull down the worst slums and, with the Government, take steps to arrest blight. It is inevitable sooner or later that they should acquire nearly all the inner areas. Where these are likely to become hopelessly dilapidated within the 20-year period, is it not time to acquire them now? We cannot afford to let them go to rack and ruin. Planning for increasing obsolescence is absurd.

CONCLUSIONS

If we think of towns as a whole, and with the knowledge of possibilities disclosed by the plans, weigh assets as well as liabilities, I think, in general, we should come to the following conclusions:

(*a*) The Government and local authorities should develop new policies within the existing framework of legislation, though minor amendments and simplifications may be necessary. Together they should think and act regionally. In order to do so some regional planning machinery is essential. Perhaps mixed boards, which would translate national policy into local terms would be most effective. It might be possible to use the Town Development Act and the New Towns Act more imaginatively, but at the very least a more flexible housing policy is required, so that there will be agencies to build in those places where houses are most urgently needed.

(*b*) Very much greater effort should be made to maintain our stock of millions of houses which are now rapidly depreciating and which must stand for another quarter-century or more. It would make both economic and social sense to forgo building one new house in order to save 10 houses (which must have a relatively long life) from falling into utter disrepair and becoming slums. Our towns are in large part blighted already. It is quite wrong to condemn people, and particularly children, to live in areas of increasing decay.

(*c*) We shall always need the inspiration which comes from great ideas and imaginative schemes but is it not time to think of the improvement of a town as a whole as something which would stir the imagination? "Practise yourself, for heaven's sake, in little things, and thence proceed to greater," was the advice of Epictetus. A whole community of citizens would participate if a thousand little improvements were made at relatively little cost. In how many towns is neighbourhood initiative and voluntary effort encouraged? Wouldn't it make sense, for example, if authorities were to embark on schemes to put a pattern of small playgrounds for children across the vast bye-law areas: playgrounds which could be paid for twice over by savings easily made if new housing schemes were more intelligently designed? Wouldn't it make sense if relatively tiny groups of small dwellings for old people were spaced throughout a town? They would cost less per unit than half the amount of a dwelling in a tenement block. If they were built many family houses would be released for families with children. Such things would surely make sense, but perhaps they would be "administratively difficult" and it might not be easy to "get grants." Is it not time for central and local government to think of the true costing of schemes—in human as well as economic terms? Should we not think again about grants and their distribution?

(*d*) In new housing estates densities should be increased. With a well-balanced mixture of dwelling types they could average, perhaps, 16 dwellings per acre instead of 10 or 12. At such a density layouts could not only be more urbane, more "cosy," and more human, but also more economical. On the average estate there is a ridiculous waste in excessive roads, elongated services, verges, and misplaced open spaces. Such waste is at the expense of agricultural land and the older parts of each town. It leads to higher rents than are necessary. It perpetuates the idiotic habit we have got into when, without question, we assume that dwellings should be crowded together at high densities and at excessive cost in slum clearance areas, while spread and sprawl occur on new land. Take notice of human desires. If you do economies could result. Look at the housing land in the town as a whole. If you do you will see that by reducing densities on the small proportion of reconstruction land and increasing densities in the large new housing areas you may well save land. You will certainly save money. Saner results might be obtained by pooling land costs—the high with the low. We might get better human environment if financial assistance in land acquisition were kept as a separate item and there was a standard subsidy per dwelling. Then if a local authority wished to indulge in extravagant building it could charge higher rents or make up the difference itself.

(*e*) Many points which have not been mentioned will no doubt be made in the discussion. As a conclusion I want to say only one thing more. It has been referred to before and it is this. Within the national limits and a national strategy those responsible for development plans must do everything possible to encourage enterprise whether it be public or private. The orthodox view of "control" is not good enough. If necessary (and it may be very necessary as land for development is now so circumscribed), powers of acquisition should be used to make land available in the right places and in good time. Layouts must be prepared which will assure greater efficiency and economy. There is an enormous field for experiment and improvement. Let none of us neglect the opportunity offered or, out of prejudice, overlook the simple, though administratively difficult, solutions that from time to time present themselves. On all occasions we should allow:

"Humility that low, sweet root
From which all heavenly virtues shoot"

to temper judgments. This is a first essential in democratic planning.

TOWN PLANNING DECISIONS

National Park Order for Removal of "Disfigurements" Confirmed

THE Minister of Housing and Local Government has confirmed an order made by the Peak Park Planning Board requiring the removal of a camping site, café and petrol filling station at White Lodge, in Taddington Dale. This is reported to be the first order of its kind made by an authority responsible for a National Park, and was the subject of a public inquiry held at Bakewell last year.

It was stated at the inquiry that the Minister's decision would be regarded as of great significance in indicating his attitude towards National Parks administration. MR. J. N. MARTIN, representing the Peak Planning Board, said that upon the result of the appeal, other National Park authorities would know whether or not they could set about their first duty, which was to remove existing disfigurements from the landscape.

It was contended on behalf of the appellant that the Board had not kept a proper balance between scenic beauty and public facilities for its enjoyment. The site was a traditional caravan and camping ground and the property would be unobjectionable if it were repaired and painted. MR. G. G. HAYTHORNTHWAITE, representing the Council for the Preservation of Rural England and the National Trust, suggested that if the Minister allowed the appeal no planning authority could in future make use of the relative provisions of the Town and Country Planning Act and the National Parks Act, which would become a dead letter.

Proposed Construction of Hall on Residential Site

AFTER endeavouring for five years to find a suitable site for the construction of a hall, South Benfleet Memorial Fund, Ltd., have been informed by the Minister of Housing and Local Government that their appeal against the refusal of the Benfleet U.D.C. to allow them to construct a building on a site in Hope-road, Benfleet, has been dismissed.

A considerable number of residents in the district supported the proposal, states the Minister, but the majority opposed it because they feared disturbance by noise and traffic, particularly in the late evenings. Having considered all the facts, the Minister is satisfied that the Council were justified in refusing permission for the erection of the hall, on a site consisting of two small building plots between dwelling-houses in a quiet residential street.

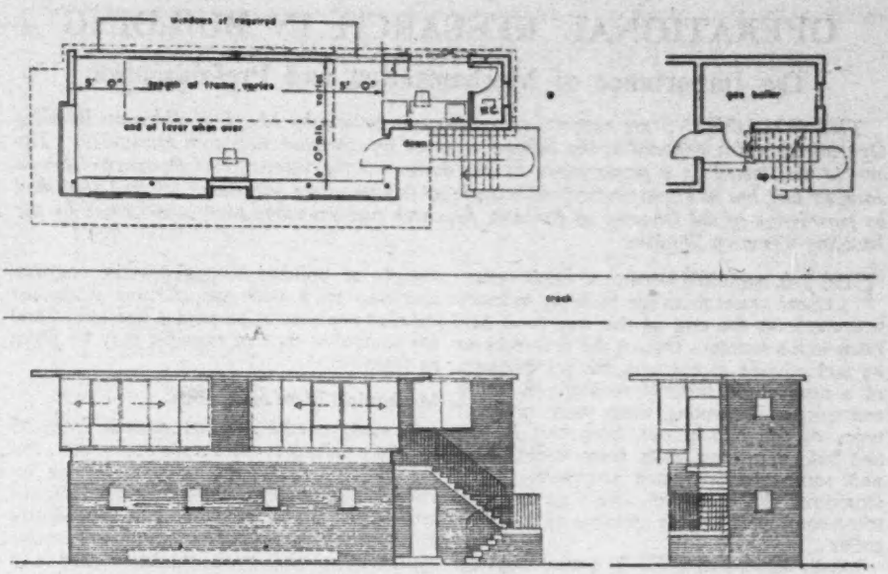
Harley-street Area: Change of Use Allowed

THE effect of the National Health Service upon the demand for consulting rooms in Harley-street and thereabouts—where a few years ago there was a scramble for all vacant accommodation—was the subject of evidence at a recent inquiry into an appeal by Dr. L. Forman against the refusal of the L.C.C. to permit the ground, first and second floors of 19, Devonshire-street, St. Marylebone, to be used either as professional offices or as the headquarters of an institute.

In the old days, it was said on behalf of the appellant, a young doctor came along, bought his house in Harley-street, lived and died there and then another doctor stepped into his place. That cycle was going on all the time. But during the last couple of years there had been a dramatic change. Any number of consulting rooms could now be had and were not wanted. The change, it was said, had been such that the district might become derelict within seven years.

The L.C.C. contended that they desired to retain the residential character of the area and that the premises were readily convertible into dwelling units.

The Minister states that whilst he agreed with the Council that it might be physically possible to convert the premises into flats, such a conversion would not, in his opinion, be a satisfactory way of meeting the requirements of persons seeking accommodation in this particular neighbourhood. He had therefore decided to allow the appeal, subject to the condition that the windows of the premises were kept curtained and not used for the purpose of display.



A STANDARD SIGNAL BOX.—Illustrated above is a design for a signal box, prepared by the Architect's Department of the Railway Executive, which has now been standardised for use on British Railways. There are four variations of the standard design, types A, B, C, and D, to meet different requirements. Type C (above) is a typical example. The designs cover the general layout, the floor arrangements, cooking, eating and sanitary equipment, natural and artificial lighting and nameplates.

Minister Declines to Confirm Compulsory Purchase Order

THE Minister of Housing and Local Government has refused to confirm a compulsory purchase order made by the Edmonton Borough Council in respect of a tenth of an acre of land in Church-street, Edmonton, N.

At a public inquiry held in September last the owner, MR. ALEXANDER WAYLAND, opposed the council's action. He said he had paid £165 for the land with the intention of building a bungalow, and that he was subsequently offered £25 for it by the council.

MR. H. BACKHOUSE, the town clerk, said that the council desired to build four flats on the site. Mr. Wayland had offered to sell the land to the council, but a figure could not be agreed because he had bought it at a figure in excess of its "restricted" value.

"The objectors," said Mr. Backhouse, "contended that it would be unreasonable and unjust to confirm the order, and that it was not in the national interest for the council to develop the site. I submit, however, that it is more in the national interest for the council to provide accommodation for 12 people than for a private individual to build a bungalow which will provide accommodation for only three persons."

MR. S. MAGEE, on behalf of the Edmonton Liberal Association, said that the council's proposal raised a question which affected the liberty of the individual.

The Minister's decision not to confirm the order is based on the ground that Mr. Wayland intends to develop the site himself.

TOWARDS IMPROVED EFFICIENCY

A Competition for Coronation Year

DETAILS of a £500 Coronation Year competition, which has been organised by Messrs. Acrow (Engineers), Ltd., are given in the December issue of the company's house journal, "Acrow Review."

The competition, which is open to all, calls for ideas for improving the efficiency of one or other of the processes involved in building and civil engineering construction. Complicated descriptions and elaborate drawings are not called for: it is the idea itself, clearly and simply described, together with simple sketches, which will score.

Those aspects of construction equipment which are the particular concern of the company are steel shuttering and propping; scaffolding of every type; concrete mixing and placing; hoisting appliances, and builders' plant ranging from small hand tools to heavy earth-moving equipment. Any device, no matter how elementary, which is calculated to reduce the cost of and speed up these or any other processes, is worth submitting, say the organisers.

Entries must be sent in a sealed envelope to arrive not later than March 31 next, addressed to the Managing Director, Acrow (Engineers), Ltd., South Wharf, Paddington, London, W.2, and marked "Coronation Year Competition." The first prize will be £250, the second £100, the third £50 and there will also be 10 prizes of £10 each. Any prize-winning idea will become the sole property of the company, who reserve the right to adapt, use or market the same in any manner they think fit.

OPERATIONAL RESEARCH IN BUILDING

The Importance of Mechanisation and Prefabrication

THE FOLLOWING are extracts taken from an article by Mr. J. F. Eden on Building Operations which appears in the current issue of Operational Research Quarterly. The article was based on a paper given by the author to the Operational Research Club in January last, but had been revised and brought up to date where necessary. It was published by permission of the Director of Building Research and described work undertaken by the Building Research Station.

THE first organised attempt to apply operational research to the building industry was made at the end of the war (said Mr. Eden in his article). One of the first tasks to be tackled was to evaluate the performance of a number of different methods of house construction. Among these were different types of concrete houses, both cast *in situ* and built of precast units, some steel-framed and some timber-framed structures; some structures almost entirely built on the site, some employing a large measure of prefabrication.

It was decided to build 50 houses each by these methods on different sites, and to observe the construction in as great detail as was possible, so as to measure the labour expenditure house by house and operation by operation as work proceeded.

A number of sites of traditionally built houses were also observed in this way, in order to discover the range of performance in traditional building, and to provide data, which could be subjected to statistical analysis and give information against which to measure the results from the less traditional sites.

Summarising the findings of these experiments, we can say that the best methods of construction examined saved up to 40 per cent. of the manpower in the parts of the house to which they were applied. They were, however, only applied to about one-third of the construction of the house, so that the saving in terms of the whole house was not more than 20 per cent. at the best. In terms of cost, it was shown that although no large savings had been achieved, the best methods were capable of being slightly cheaper than the traditional type if produced efficiently on a large enough scale.

These results have been borne out in practice. About 145,000 permanent non-traditional houses have been built in this country since the war, or about 20 per cent. of the total number of permanent houses built by local authorities. The more successful of the types examined have contributed largely to this figure, and have been among the cheapest. Further developments are improving the figures of cost.

A study of the results of these experiments indicates the possibilities for the future. Such savings as were achieved have been realised by the introduction of new methods of construction for the walls and the walls only. It is clear that if similar methods could be applied to the remaining two-thirds of the house we might expect very much larger savings.

It has been observed that the greatest scope for the use of mechanical plant on housing sites lies in the building of the sub-structure and the walls and roof. This is basically a handling problem and the experimental work which has been and is being done at the Research Station into the field of materials handling is based upon the analyses we have made of the recordings from traditional housing sites mentioned earlier. These have been augmented by later productivity surveys carried out by the examination of the cost records of a statistical sample of builders throughout the country, and also by a wide use of time study for detailed analyses of particular operations and for comparisons. An example may be given as follows:—

Mechanical Plant on the Site

A study of the original records from 15 to 20 different sites showed that the foundation and ground floor of houses involved costs varying from £120 to £250 for labour and plant, and a labour expenditure of from 270 to 540 man-hours. A major operation in the work is the mixing and placing of concrete using a concrete mixer and wheelbarrows. Teams varied from six to 13 men, barrow runs from 10 to 50 yards, output from 1 to 4 cu. yds. per hour, productivity from 0.1 to 0.37 cu. yds. per man-hour, and costs of labour and plant from 10s. to 30s. per cu. yd. There appeared to be no relationship between these variations; all one could say was that the best results were obtained on sites reported to be well organised, and also on sites where the work on concreting was reasonably continuous.

The first attempts made to study the operation in detail disclosed the importance of continuity, since about 25 per cent. of the labour was expended in starting up the jobs and closing them down. A number of time studies disclosed that part of the variation could be accounted for by wrongly constituted teams, and showed that the organisation of these teams was fairly complicated. We were, however, able to establish certain simple rules for determining the number of men required to push wheelbarrows. For instance, with a concrete mixer producing 7 cu. ft. of concrete in a batch, operating with all normal lengths of barrow run, three men produce the cheapest team and six men the quickest. These rules can be applied on any site. More important still, we found that even with the best organised teams, the use of wheelbarrows only enabled the mixer to work to about 70 per cent. of its capacity, and that this could be regained by using a large container capable of taking away the whole batch from the concrete mixer in one operation. We could set down or write a specification for the machine required. At this stage we tried to get manufacturers to produce something, but no one was the slightest bit interested. We had to produce more "bait" and by 1948 we had three rather extraordinary looking prototype machines at work on building sites and actually lowering costs, in one case to 3s. 7d. per cu. yd. as against the range mentioned above, of from 10s. to 30s. Such a comparison is, however, not justifiable. The low figure was obtained on one site with a number of peculiarities; the range covers the whole country. How can we obtain better comparisons? Our attempts so far, with which we are not at all satisfied, comprise a mixture of normal time studies and common sense. Even so, we have to take very great care both in the selection of sites and in the interpretation of the results, and even a fairly simple comparison may involve trials at three or four sites over a period of months. In the case mentioned above, the comparison finally achieved was on the basis of normal conditions of site, quality of work and effort, and the figures were about 5s. 6d. per cu. yd. with the machine, and 9s. 6d. with wheelbarrows.

Interesting the Manufacturers

Our experience is that a development project of this kind is rather like making a snowball. You do a lot of work on paper, building up your snowball, but no one is the slightest bit interested. As your development proceeds, the snowball gets bigger and interest awakes. There comes a stage in any project when a slight push in the right direction sends it downhill, gathering speed, and there is no need to run after it. The case quoted above is in point. In 1947, although we knew the answers, we could convince no one, and there was even a certain amount of criticism of our work. At the end of 1948, one manufacturer was biting. By 1951 there were nine different manufacturers producing machines of this type, which were being exported all over the world.

The development of mechanical plant for building has always to be conditioned by the ability of the industry to accept them. Builders are not used to using mechanical plant and do not naturally think in terms of it. This applies also to architects. Our first task after the war was to break down a prejudice against any form of mechanisation. We have done this by encouraging the introduction of a number of small and inexpensive machines, which show a modest saving on particular operations without seriously affecting traditional methods of work or design. For example, a first glance at the latest productivity survey shows that about 30 per cent. of houses are built with the aid of mechanical mobile hoists or elevators for carrying bricks and mortar; machines which have been introduced since 1946. To go further, it is necessary for builders and architects to think differently; to think in terms of building houses mechanically rather than in terms of using machines to carry out operations which have hitherto been done manually. There is, for instance, a great volume of work in building a pair of houses which can be grouped under the heading of lifting and carrying. It occupies on the average about 550 man-hours, costs about £80 at present labour rates, and involves the moving of some 286 tons of materials. The problem of mechanising the work is made difficult by its extremely varied character, the wide area over which it takes place, and the slow rate at which materials are consumed. This points to the need of a very adaptable handling machine, to transport all materials vertically and horizontally over a wide area with few men at low cost.

Use of Cranes

Our researches tend to show that the type of machine most likely to be suitable for the work is a light crane with a very much longer reach than is normal, and a high degree of mobility; and it is possible to write down a specification for such a machine with a fair degree of precision. We find machines roughly conforming to this specification, but rather too big and too expensive, in the electric rail-mounted tower cranes which are used very extensively on the Continent for large buildings, and which are now beginning to find their way into this country.

Given such machines, it is possible to calculate what alterations would be required to normal house building methods to enable

them to be used effectively. Means have to be found to increase the speed of building house structures to keep the machine working economically. We have taken as an example the smallest Continental tower crane we can find and have carried out tests on it at our experimental station. From the results we have been able to work out a plan for using it on a typical house-building site. By increasing the size of bricklaying gangs considerably we have shown that it should be possible to reduce very considerably the proportion of unskilled labour and build house shells at something like three times the normal speed.

There would be savings in three directions:—(*a*) Directly, in reducing handling costs (a potential saving of up to 400 man-hours per pair). (*b*) Indirectly, in enabling a better balance to be achieved in the organisation of gangs on the site (reduction of process allowance). (*c*) Saving in overheads due to building faster.

Estimates show that the total of these savings could be as high as £100 per house, if full efficiency could be obtained. Even at the lower efficiencies likely in practice the potential savings are still substantial.

We hope to put the plan into practice on a house-building site in the near future.

If we can achieve the introduction of a crane which is really suitable for house building, and show that this can save money and time in building houses of traditional character, I think it will open up very wide fields for future development. Once this has been accepted, it is a short step to building in larger units, prefabricated in a factory, or even on the site. The way will indeed be very much clearer to the integration and application of the results of our operational researches in design and method over the past few years.

Summary and Conclusions

To summarise what has been said: operational research in building in this country offers a very wide scope. The work that has been done has been, in the main, confined to the activities of Government research stations since the war. A great deal of very important data on building methods and efficiency has been accumulated, related chiefly to house building, and an analysis of the data has fairly clearly established the major problems which have to be tackled. Present methods of building houses require an organisation on the site which is too complex for efficiency, and great advantage would accrue from a simplification of organisation. The two main weapons are mechanisation and prefabrication, and the effective use of these means alterations to organisational methods as well as design. The greatest effects will come from the prefabrication of the "finishings" of the houses, and from the use of mechanical plant, particularly handling machinery, on the site in the construction of sub-structures, walls and roof. In both these fields, pilot stage experiments have already been carried out which show the way ahead and enable some tentative measurements to be made of the savings which might be achieved.

Coronation Lighting Fittings

The E.L.M.A. Lighting Service Bureau has collected a number of examples of the use of light in Coronation decorations. Some are factory-made and some are the kind that can be made by anyone at home. They are now on show at 2, Savoy Hill, Strand, W.C.2.

COMPARATIVE PRICES OF MATERIALS

Copyright *The Builder*

	January, 1939	*January*, 1952	*January*, 1953
BRICKS—	£ s. d.	£ s. d.	£ s. d.
FLETTONS	2 6 3	5 5 3	5 8 0
BLUE WIRECUTS	7 4 0	18 16 6	20 12 0
GLAZED BRICKS	24 0 0	60 0 0	64 0 0
THAMES BALLAST	7 3	17 3	not available
PITS SAND	7 9	17 6	19 11
¾ in. SHINGLE	7 3	16 11	18 5
½ in. BROKEN BRICK	11 3	19 3	19 3
PORTLAND CEMENT	2 2 0	4 15 3	4 11 0
PORTLAND STONE	4 5	6 11	7 5
SLATES—			
24 by 12 in.	31 5 0	89 3 9	96 7 6
20 by 10 in.	20 15 0	58 10 6	65 10 6
16 by 10 in.	14 7 6	40 16 0	42 12 6
TILES—			
MACHINE-MADE	4 2 6	11 6 0	12 4 0
HAND-MADE	4 17 6	11 10 0	12 2 0
SOFTWOOD—			
CARCASSING QUALITY	£18—£22	£115—£120	£95—£105
JOINERY QUALITY	£28—£35	£130—£135	£110—£130
HARDWOOD—			
EUROPEAN OAK	14 0	2 0 0	1 17 6
ENGLISH OAK	10 0	1 5 0	1 5 0
HONDURAS MAHOGANY	15 0	2 15 0	2 15 0
MOULMEIN TEAK	15 0	3 0 0	3 0 0
R.S. JOISTS FABRICATED	16 10 0	45 0 0	50 10 0
⅝ in. MILD STEEL RODS	15 0 0	31 15 6	36 2 6
1 in. GALVANISED BARREL	5¼	11¼	11¼
SHEET LEAD	23 0 0	199 0 0	145 15 0
LINSEED OIL	2 11	19 0	18 6
GROUND ENGLISH WHITE LEAD	2 10 0	11 3 6	8 16 9
WHITE LEAD PAINT	16 8	3 9 0	3 0 0
RED LEAD	1 18 0	10 3 9	7 4 3

INQUIRY BUREAU

Damp Walls

Q.—Your advice on the following problem would be much appreciated. These are the details:—I have a house in Ireland (Co. Wicklow, Eire) with two rooms on the ground floor. One room is very large, the other smaller. The ceilings are lofty. The walls are very thick, being built of stone and plastered over as is usual in Co. Wicklow. The house is 50 years old.

On first taking over the house, damp on the interior surface of the walls was observed due to lack of or defective damp course. The faulty plaster was removed and the wall re-cemented incorporating a waterproofer. This cured the dampness. After a short interval the wall was plastered with hard-wall plaster. Two months after this was done cracks in various parts of the wall developed in the hard-wall plaster. This was two years ago this month. I am told that the cracks in the hard-wall plaster are due to too much lime in the mixture. I should also mention that the walls were treated with Walpamur.

I am now wondering what would be the best method of dealing with the redecoration.

R. E. R.

A.—The information given in the question indicates that the undercoat which was made of lime mortar and formed the backing of the hard-wall plaster, was put on a very non-absorbent backing composed of cement (Portland) and sand with a waterproofer incorporated. This, when set, would be non-absorbent, and, in consequence, when the lime mortar backing was put on, it would dry out and have no adhesion, which would cause it to crack.

If the wall is tapped by striking with a hammer, it will, no doubt, be seen that the entire backing of mortar and hard-wall plaster is loose. It should be taken off, replastered, the surface cleansed and slightly hacked and rendered in Keene's cement.

Alternatively, if the cracks are only slight and the hard-wall plaster is adhering properly, clean off the distemper, then put on a coat of weak size and line the walls with a crown paper. This is supplied in rolls and should be thoroughly soaked before applying the plaster. The crown lining should be hung horizontally, followed by a raised or relief paper. This, when thoroughly dry, could be decorated by applying a coat of weak size, a coat of oil colour and finish matt.

The above method would, in some measure, guard against the chances of humidity, which might settle on a surface such as distemper or wallpaper thus causing the surface, possibly, to crack due to movement caused by the moisture going into the plaster surface and then drying out.

G. W. H.

A Contract Point

Q.—Could you give us an opinion on a point of contract law which concerns a contractor currently engaged in building a housing scheme for a local authority.

The contract document is the 1950 version of the R.I.B.A. Standard Form of Contract for Building Works in the form for

use by local authorities, where quantities form part of the contract.

The contractor, in addition to proceeding with the works initially contemplated by the contract, has expended large sums, and is expending further large sums, in carrying out substantial works by way of variation orders in obedience to the instructions of the architect, for which additional works the contractor claims to be paid suitable interim payments on account, less retention, in accordance with the terms of Clause 24 of the Conditions of Contract.

Notwithstanding the terms of that clause, the architect persists, despite repeated protests from the contractor, in declining to certify for any interim payment whatsoever in respect of all or any of these variation works which he has ordered. He argues that he cannot definitely know what is the value of any variation works until all of them have first been measured and valued, and that under the terms of Clause 9 of the Conditions of Contract, he is under no obligation to produce measurements or valuation in respect of variation orders until six months shall have elapsed after completion of the contract works. He furthermore argues that in the absence meanwhile of such measurements and valuation, there is no occasion for him to take any account of variation works when certifying for interim payments.

In thirty years of experience in such matters, we have never before encountered such a contention, and we would say that it certainly constitutes a wide departure from accepted quantity surveying practice.

We have been given to understand that the architect in point bases his present attitude on advice received by him from the local authority's legal adviser. It seems to us, as quantity surveyors, that such an attitude is morally quite unjust, and we wonder whether possibly an error might have occurred in construing the contract legally. We seek to verify what is the truth of it.

As a subsidiary issue relating to interim payments outstanding for the earlier variation works executed to date by this contractor (none of which works has yet been taken into account in any interim certificate) we would also like to know whether the contractor possibly might be entitled to claim under the terms of Clause 1 of the Conditions of Contract for reasonable interest on his money outstanding, on the grounds that it concerned an overdue debt, and as such represents loss or expense beyond that provided for in or reasonably contemplated by the Contract?

W. J. M.

A.—A legal correspondent writes: In the first place, may I point out that the Form of Contract used contains an arbitration clause (Cl. 27), under which any dispute or difference arising between contractor and architect, including any dispute as to the construction of the contract and the withholding by the architect of any certificate to which the contractor may claim to be entitled, is to be referred to the named arbitrator. I am at a loss to understand why the procedure contained in the footnote to Clause 27 has not been followed, and the dispute referred.

What your correspondent terms the "truth" of the matter can be seen from the following observations:—

1. Under the form used, or any form of the same kind, it is well established that the architect's power to order variations does not extend to extensive variations of the kind described, but is confined to matters concerned with the "manner" in which the contract work is to be carried out It is also clearly established that there is an obligation upon the contractor to satisfy himself as to the architect's power to order variations, and that unless they are essential to the satisfactory completion of the contract work, the contractor can refuse to carry out these extra works, for they are outside the contract work as defined, in this form, in the quantities. It is usual, as a result, to make "additional work" the subject of a separate contract which can either be expressed or implied.

2. But both architect and contractor are trying to bring the additional work within the form used. As these extensive variations are outside the contract the question of payment under interim certificates (Cl. 24) does not arise. What should have been done was that, when the contractor agreed to do this additional work, he should have agreed with the architect as to the manner in which they were to be paid for, which might well have been by interim certificates, or some kind of stage payments, which would have satisfied the reasonable objection of the contractor to the delay in payment, and tying up of capital, to which he refers as "morally unjust."

3. The form used does not provide for the payment for variations (i.e., extras) by means of interim certificates; they are intended to be measured and valued (usually by the surveyor) and the contract sum amended accordingly. The period of the final measurement under this form is, by the way, three months (see appendix) unless otherwise stated. The amount due for variations will thus be provided for in the final settlement.

Water Penetration

Q.—I wonder if you can suggest a cure for water penetrating through the steps leading from the ground to the first floor. I have tried various remedies but they only last for a short while. The house is over 75 years old and I do not wish to take down and rebed the steps unnecessarily.

T. W. T.

A.—I assume the steps referred to are Yorkstone and after 70 years of wear and tear are worn, allowing water penetration. The best advice I can offer apart from taking down is to encase them in the following manner.

Trim off the oversailing noses linable with the risers, fix a temporary shuttering about one and a quarter inches from each riser and two inches higher than the tread. If the face of the tread can be hacked, so much the better. Thoroughly clean before applying a slurry made of eight parts water and one part of a proprietary solution as per makers' instructions. Incorporate in this solution 18 parts of fresh Portland cement, mix in fine ¼th granite chippings, use as a slurry and allow 24 hours to harden. For the final topping, two inches on top of the existing treads and one and a quarter inches in front of the riser, use two and a half parts of ¼th granite chippings and one part of clean sharp washed sand and one part fresh Portland cement. The aggregate must be washed, and be both clean and sharp. The mix must be stiff and well densified. The surface should be well sealed by tamping; avoid over-trowelling and let the work thoroughly mature before using.

G. W. H.

(The name of the proprietary solution referred to has been forwarded to the inquirer.)

THE HOUSING DRIVE

Mr. Macmillan's Letter to Local Authorities

MR. HAROLD MACMILLAN, Minister of Housing and Local Government, has sent the following personal letter to all lord mayors and mayors, the chairman of the London County Council, and the chairmen of all urban and rural district councils in England and Wales, on the housing tasks for 1953:—

You may remember that I wrote to you a year ago about housing. I asked you to help me in the "housing drive." I now write to send you my personal thanks for all that you and your colleagues have done and are doing. It is a wonderful year's work; and we can all be proud of it.

Housing is something on which we can all work together. For we all know the great task that still lies ahead. 1952 has been good; 1953 and 1954 must be better still. We must go on increasing year by year. For as well as the housing lists, we have the huge problem of demolishing and rebuilding the slums. All this, of course, will make a heavy demand upon materials. Their supplies are increasing and will increase; but so is the demand. May I ask you to make sure that we make the best use of materials? Your clerk will have received our various circulars giving detailed suggestions for savings in bricks, cement and timber. These are really necessary.

May I ask you to use local bricks to the fullest extent so that you can keep the local brick-yards fully employed? Wherever you can, see that orders are placed ahead; for now is the time when stocks can be built up. We have got to use all the bricks we can make and everybody cannot have the cheapest.

But even with the expansion in production we cannot afford to waste. We must save, not to hoard, but to spend. Saved bricks mean more houses—and so with other materials.

I am sure you will help me this year as you did last year. My officials will always be at your service to help you and your council.

Once more I send my thanks and good wishes for 1953.

Occupational Hazards

During the 1951-52 session the Leeds Advisory Council on Occupational Health devoted its time mainly to the consideration of hazards and health conditions in some of the important local industries, according to its annual report. Two sessions were devoted to consideration of the hazards of the building industry at which the Advisory Council was assisted by contributions from Mr. M. Tomlinson, of the Leeds Federation of Building Trades Employers, and Mr. R. Tyler, of the Amalgamated Union of Building Trade Workers. In summing up the discussion, it was agreed that the main problem in the industry, from the point of view of hazard, was the carelessness of the unskilled worker, while it was suggested that it might be in the interests of both employers and workers to look further into the question of protective clothing and to consider how more attention might be paid to the recommendations of the Working Party Report and to the Factory Act provisions in regard to welfare facilities.

THE MECHANICAL ERECTION OF REINFORCED CONCRETE BUILDINGS

By A Special Correspondent

THE increasing mechanisation of the building industry is reflected in the greater use of large precast members manufactured in a factory and handled on the site by large cranes, and in the use of large units of shuttering of a size previously seen only in civil engineering construction. Amongst these developments there has lately been a great deal of interest, particularly in the U.S.A., in the use of methods which eliminate the need for shuttering above ground level by casting both floor and wall slabs on the ground and hoisting them by various means to their final position in the building.

Fig. 1.—Concrete hangars at Marseilles, with the roofs cast at ground level.

One of the most interesting of these novel methods being used in the U.S.A. is the Youtz-Slick system which consists in casting the floor slabs one on top of another, and then lifting them to their final positions where plates embedded in the concrete slab are welded to steel columns. The casting bed for all the upper slabs is the ground-floor slab which can also be lifted to any desired height if its final position is not at ground level. When the fill is in place, reinforcement for the ground-floor slab is fixed and the conduits for mechanical and electrical services are inserted between the top and bottom layers of reinforcement. Shutters are fixed for the sides of the slab and for any openings in the floor, and the concrete is cast. The next slab is cast on this ground slab. The slabs are prevented from sticking to each other by paraffin wax or a wax-base liquid. Lifting collars are placed around each column before fixing the reinforcement for the slabs.

Following an initial 3-in. lift and levelling at the columns, the slab is lifted to the desired height by hydraulic jacks placed on the top of each column head, the level of the slab being checked during lifting. Each jack contains a piston which pushes upwards two threaded rods without allowing them to turn and lifts the slab in steps of 3 in. The lower ends of the rods are connected to collars welded to plates embedded in the concrete. The height gained at each stroke of the piston is maintained by nuts on the threaded rods which bear against the base of the jack. The nuts are tightened by chains actuated by small motors coupled to the movement of the jacks. At the end of every stroke of the piston the pressure is released and a spring pulls down the piston-head ready for the next lift of 3 in. Each jack is capable of lifting about 100,000 lb. At the desired height the slab is connected to the column by welding a collar on the column to the plate embedded in the slab. When the welds have cooled for 30 minutes, the slab is released from the lifting equipment. A crushing strength of 3,000 lb. per sq. in. is required for the concrete and the slabs are allowed to cure for seven to ten days.

The greatest height to which a slab has yet been lifted is 44 ft. during the construction of a two-storey building in Los Angeles in which the second floor is at a height of 28 ft., and the first floor at 14 ft. Each slab is 80 ft. long by 30 ft. wide and is 8½ in. thick, the span between the columns being 18 ft. Because of their heights the roof and the second floor were lifted in two stages, the slabs being supported by timber props while the lifting equipment was raised for the second stage. The steel columns are hollow and were guyed and strutted during the erection of the slabs.

HANGAR ROOFS

The roofs of two hangars of shell construction at Marseilles were constructed on the ground and raised in a manner somewhat similar to that described above. Each hangar is 333 ft. wide and 193 ft. long, and has a clear height of 62 ft. below the ties at the entrance. The roofs are reinforced concrete tied vaults each comprising six secondary vaults 32 ft. wide by about 7 ft. high and with a thickness of 2½ in. The total height of the structure is about 107 ft. The ties, which are of prestressed concrete, are at about 33 ft. centres.

Fig. 2.—The roofs being raised into position.

Each roof, which covers an area of 7,650 sq. yds. and weighs 4,200 tons, was cast at ground level and raised on two lines of eight supports to a height of 62 ft. The supports are columns, each about 3 ft. square and comprising a series of precast elements about 3 ft. high. The columns at the ends of the building are U-shaped and the intermediate columns a hollow square in section. In the first element of each column was placed a hydraulic jack, of 300 tons capacity, and with the use of these 16 jacks plus two 100-tons jacks for controlling the horizontal movement, the roof was lifted in steps of 3 ft. At each lift the roof was wedged in position until the jacks were ready for the next lift. The first roof was raised to its final height in 38 days, and the second in 23 days. Fig. 1 shows both roofs on the ground ready for lifting and Fig. 2 shows the first roof in its final position.

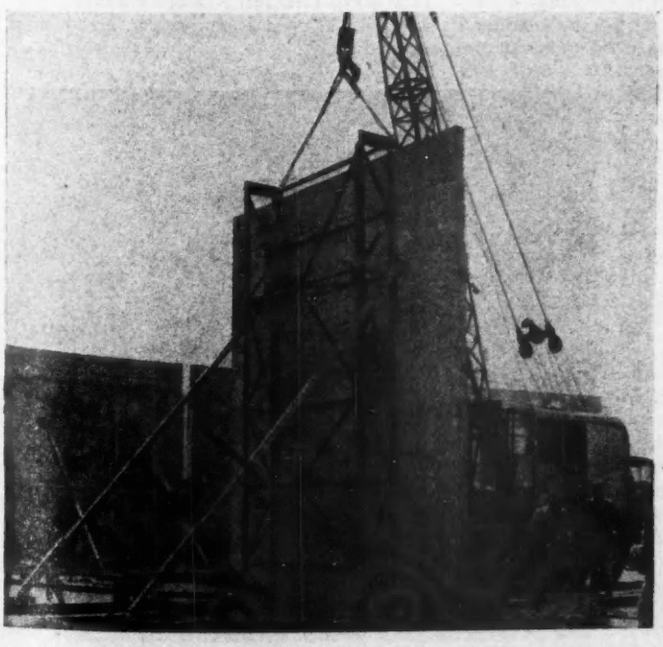


Fig. 3.—Erecting a precast wall panel 21-ft. square with the aid of a "strong-back."

"TILT-UP" WALL CONSTRUCTION

For the construction of walls, a method in use in the U.S.A. known as "tilt-up" construction has progressed considerably since the end of the war. Although

Fig. 4.—Departure building at London Airport during construction.

primarily used for single-storey buildings the methods have been applied to the construction of the walls of multiple-storey buildings. In this method large sections of the walls are cast on the floor and then, when sufficiently strong, lifted into a vertical position by one of a variety of means. The width of slab cast at one time is generally sufficient to fill in the space between the columns. These may be precast or *in situ*. If they are precast then precautions have to be taken to form weathertight joints between the two precast elements; if the wall slab is lifted into position and temporarily stayed before the columns are cast, then the difficulties of obtaining a waterproof joint are not so great.

The procedure consists in building first the footings, foundations and ground-floor slab in the conventional manner. On the hardened floor the shutters for the edges of the wall slab are placed, window and door openings blocked out, and electrical and other conduits fixed. Dependent upon the finish required to the surface of the slab a layer of building paper, light oil, or other suitable material is used to prevent the fresh concrete from bonding to the floor slab. Reinforcement for the walls is placed with bolts for raising the slab. The concrete is then cast and allowed to cure until sufficiently strong to be lifted. This is frequently done by means of a crane with a "strong-back" secured to the bolts cast in the slab (Fig. 3).

Before the wall is placed in position a bed of mortar is laid on the foundation and as the wall slab is tilted on to it the excess mortar is extruded. The joint may then be struck off and the slabs temporarily braced in position until the column is cast or the joint between the slab and the precast column is made. One method of joining is to leave dowels projecting from the sides of the slab which engage with dowels projecting from the columns of precast frames. These dowels are welded together and the space between the two members filled with concrete.

Where the ground floor is not at ground level it is common practice in the U.S.A. for the wall slab to be cast in two panels. The lower panel extends from the foundation to the ground floor level, and is often cast on the ground, and the upper panel is cast on the ground floor slab and extends from ground floor to first floor or roof in the case of single-storey buildings. The lower panel frequently has a beam formed along its lower edge by increasing the thickness of the slab for a short distance up the slab. The foundation may then consist of isolated bases with the slab spanning between them as a foundation beam.

Although a strong-back is often used to strengthen the slab while it is being lifted, some contractors lift directly from bolts embedded in the slab at about two-thirds the height of the slab; at least three lifting points should be used, the outer ones one fifth the length of the slab from the edges and the third one in the centre of the length. Reinforcement in addition to that normally inserted in the slab should be provided to resist the stresses due to lifting.

"VACUUM" LIFTING

The high stresses caused by lifting large slabs with the consequent risk of damage by breaking, or the loss in production due to having to leave them to mature until they have gained a high strength has caused contractors to use the "vacuum lifter."

This device has already been used in other industries as, for example, in the handling of large sheets of plate-glass. In the form used for concrete construction it consists of a group of suction heads of a simple type attached to a strong frame. The heads are attached at frequent intervals to the member to be lifted so that it is lifted directly without there being bending moments between the points of support. Frequently the adoption of this method of handling will not only allow a considerable reduction to be made in the weight of reinforcement used but often the thickness of the slab may be reduced.

Large slabs or slabs which have many openings in them have been constructed with a ribbed section, in the first case to reduce their weight and in the second case to increase their strength for handling purposes. They may be cast on the ground-floor slab as are the plain slabs, the recesses being formed by timber moulds or by precast concrete blocks. Where the latter are used it is essential that the precast blocks have a smooth finish and are well oiled before the slab is cast.

A somewhat similar method was adopted in the construction of the departure building and offices at London Airport which were designed by the Air Ministry in collaboration with the contractors, Messrs. Wates, Ltd. In this case the wall panels, 7½ in. thick, 5 ft. wide and either 8 ft. 4 in. or 11 ft. 3 in. high were cast in the contractors' works. The panels were brought to the site by lorries, lifted by a mobile crane with a 50 ft. swan-neck jib and placed directly in the structure. The minimum age of the panels when erected was three weeks. The panels were kept in position temporarily by being wired to a jig erected on the floor under construction and comprised of timber posts and horizontal beams. The posts were at about 10 ft. centres and were held vertically by diagonal steel scaffold tubes. The beams were supported at the level of the window heads on steel angles projecting from the posts. The vertical edges of the panels were recessed to form a rectangular cavity in which reinforcement was inserted and which was filled with fine concrete. At each corner of the building there is a cast-in-place column of 1 ft. 7 in. by 7½ in. section. Wooden shutters for three sides of the column were made and wired to the jig, the shuttering for the fourth side being formed by the edge of one of the panels. Concrete cast in wooden shutters forms the surrounds of the doors. The steel window frames are fixed by plugs embedded in the panels.

The two-storey departure building, which is 221 ft. 3 in. long by 32 ft. 9 in. wide is shown in Fig. 4 and the three-storey office building in Fig. 5.

LLOYD'S AT CRAWLEY

NEWS of another large enterprise moving to Crawley New Town comes with the letting of a contract for the printing house and research block of Lloyd's Register of Shipping, which will be carried out under the supervision of the Development Corporation's Chief Architect, Mr. H. S. Howgrave-Graham. The contract sum is £125,000, and the work is to start immediately.

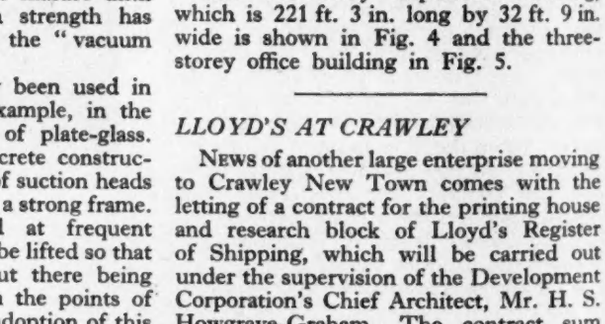


Fig. 5.—Third storey of office building at London Airport.

THE INDIVIDUAL'S PLACE IN INDUSTRY

Sweden Rediscovers its Value

The following article, which briefly describes the manner in which the employers and operatives of Sweden's building industry are working together to improve their relationships, has been prepared by Mr. Keith Martin, of Eastbourne.

SWEDEN is witnessing the beginning of a drive to put the individual in the position for which his ability and capacity are best suited. (This, one might hope, may lead to a correction of the mistake which planners of modern education make, i.e., of standardising education instead of making it selective according to the capacity of the child.)

In 1938 there was a drastic change in the relationship of the employers' and operatives' organisations, which arose partly from the desire to keep the Government out of their business relationship. Both sides pledged themselves to use every possible peaceful means to settle their differences before resorting to force.

The Chairman of the Confederation of Trades Unions said that "employers and workers are not only separated by a conflict of interests, but united by a community of interests. We have come to realise that when you are oarsmen in the same boat you should use the oars for rowing and not for clubs against each other." Here is common sense leading to the reduction of the sphere of conflict and the expansion of the field of agreement.

In the last six years there has been a drive to promote the formation of joint councils for increasing co-operation, understanding and mutual confidence: there are now about 3,000 of these joint councils in existence in Sweden with a population of 7,000,000.

The employers' organisation has set up a commission for the purpose of dealing with personnel administration and industrial psychology: half a million kronor (at 15 kronor to the £ = £33,333) has been appropriated for the first year's work. Emphasis is to be on research in problems dealing with the human factor in industry. Representatives of organised labour have agreed to serve with employers.

The employers' leader stated recently that whilst technological progress had been great the human factor had been neglected and such problems as "communications within the company, forms of co-operation, time and motion studies, personnel evaluation, promotion and much else had been scarcely explored." Consideration must be given to human values with facilities for the individual to develop according to his or her leanings and talents.

This same philosophy actuates the Confederation of Trade Unions, which is just completing the construction of a new large school for workers at Runö, in Stockholm archipelago, where members of joint councils are to receive training. Subjects to be studied are economics, social policies, labour management, labour history, union and international problems. It is highly stimulating to watch hard-headed veterans of up to 30 years' experience throwing themselves into a period of schooling with the enthusiasm that teachers wished schoolboys possessed.

The Employers' Confederation also has its training centre for courses on management and where conferences can be held.

Industrial undertakings are starting personnel departments under the guidance of specialists, and employers are asking the Trade Unions for greater differentials for individual achievement.

A frontal attack against the centralisation of executive powers within business enterprises is being led by the Chairman of the board of the Employers' Confederation, who practises what he preaches in his own company, i.e., the greatest possible delegation of authority and responsibility.

The same trend is apparent amongst the operatives, although it may vary in degree. The new generation of leaders, and many of the older ones, know that the old arguments, classical Marxism and class warfare, are futile. It is frankly admitted that the education of leaders and members alike, and understanding, are the only means by which the labour movement can be held together and developed. Wage demands are now based upon closely reasoned economics and not socialistic polemics.

The Trade Unions' opposition to profit-sharing reward for personal achievement is cracking. With good wages there is greater opportunity of rewarding the individual with the fruits of his or her skill, imagination and assiduousness.

Trade Unions in Sweden look, without enthusiasm, upon the attempts of the politically powerful labour movements in Norway and Finland to accomplish labour's object by law. They say that management has a greater moral responsibility to live up to a voluntary contract than any enforcement by law; therefore, it is better, from their point of view, to have a poor voluntary contract than a legal enforcement no matter how good the law may be.

The way to this new industrial era has been charted. It is rightly contended that better conditions can only be won by improving the total yield from the collective effort of employers and employed. Collective effort can only reach its maximum when personal endeavour is fully rewarded according to its contribution to the total yield.

Sweden has rediscovered that greatness and success depend upon the individual and the development of the resources with which we have been endowed.

Employers and operatives in Great Britain and other countries would lose nothing by studying the facts, which are fully reported in Industria International, 1953, published at Kungsholmstorg 1, Stockholm, Sweden.

L.M.B.A. CRICKET

Formation of Club

THE London Master Builders' Association, whose golfing society has operated successfully for many years, are now to have their own cricket club. For a long time past the Association have played an annual cricket match against the Blue Circle Club and have never been beaten by them. Last year they challenged the R.I.B.A. club and also won.

By forming a club of their own, the L.M.B.A. hope to be able to take part in more matches in the future. At a recent meeting of members interested in the idea, Mr. George P. Parker was appointed captain and Mr. Bernard Garrett vice-captain. Mr. Gerald A. Hill, vice-president, L.M.B.A., has accepted presidency of the club for 1953.

An invitation to join the club, either as playing or as non-playing members, has been extended to those in the Association. Arrangements have already been made for matches against the R.I.B.A., the Blue Circle Club and the R.I.C.S.

WORLD ECONOMIC TRENDS IN URBAN DEVELOPMENT

"Mobilopolis"—The New Pattern of Living

A PROGRAMME for peace which would involve a world plan for quadrupled productivity which in turn would make necessary mass redeployment of human effort from present places and pursuits to new areas and new tasks of higher priority, was outlined by MR. E. A. A. ROWSE, A.M.T.P.I., A.R.I.B.A., in a paper read at the last Town and Country Planning Summer School. The paper was entitled "World Economic Trends in Urban Development."

Mr. Rowse devoted the greater part of his talk to the consideration on a world-wide basis of increasing population, food shortage, raw material resources and various subsidiary aspects of these subjects.

Quadrupling Productivity

Introducing his proposals for quadrupling productivity, the speaker said:—

"Because war and the diplomacy that is war in another form are equally lacking logic in an atomic age, security must be sought on a more solid foundation than a rearmament crust spread across a Malthusian morass. The logistics of peace require a strength that comes from balance—not bluff. When men find work for their willing hands in a war against waste and want, peace will be more nearly deserved. When it is deserved as well as desired, peace is much more likely. There can be no better promise.

"A programme for peace, then, is simply a job of work to be done. The scale of the job can be set at a quadrupling of present productivity during the rest of this century. If food output can be doubled, and then doubled again, the world has a chance of entering the twenty-first century with man still the dominant species. This of course also infers stepping up the necessary industrialisation, which would furnish the equipment needed to make such a programme possible.

"A world plan for quadrupling productivity, within the lifetime of those who are now young, can hardly be contemplated except in terms of massive redeployment of human effort from present places and pursuits to new areas and new tasks of higher priority. It seems clear that, on a world scale, the existing, excessively distorted, pattern of settlement and occupation cannot meet the need."

New Urban Pattern

Mr. Rowse said that the present trends, economic and strategic, would seem to dictate the maximum mobility for large sections of the world's population, and he went on to describe a new urban pattern which might be developed. We take the following extracts from his remarks on this point:—

The pace of technological change, which is already bringing about the rapid development of new centres of industrial activity, will constantly increase in all parts of the world. This may be the

lesson we can draw from an appreciation of the trade and raw materials situation over the next 25 years, made recently by the Materials Policy Commission of the U.S.A.

A hint in the report of a changeover to the use of such universally available materials as silicon, gives some indication of a realisation of coming world shortages. In which case greater dependence on seasonally renewable resources, particularly celluloses, would seem to be both wise and inevitable. The location of new resources should dictate a redistribution of population; although the industrialised nations have so far largely concentrated the function of processing in their own hands, to the detriment of the economic development of so-called "backward peoples." If such trends are given free play, coupled with deliberate redeployment to relieve want, they must force on both urban and regional plans a new flexibility to permit the utmost rapidity of adjustment to unforeseen conditions.

During the past four and a half centuries, the immense outward movement of European peoples into the relatively empty spaces of the Western Hemisphere, Africa, North Asia and the Antipodes, was followed, as soon as possible after the pioneer stage, by the crystallisation of social and economic patterns into forms not too dissimilar to those of the settled societies from which their creators sprang. The outward movement from southern and eastern Asia once begun, will be so vast, so prolonged, and throw so heavy a strain on the resources of the planet, that during the next century and a half any planned utilisation of the latent resources will entail the constant and repeated redeployment of labour, materials and equipment in area after area, as the basic requirements for a technological economy are won from environments hitherto unresponsive to development.

Scale of the Task

It may serve as an indication of the scale of thinking now urgently required, if we realise that in Australia, over and above additions to existing townships, the equivalent of about 350 "new towns" will be required to house the additional urban population.

The character of a high proportion of such towns, in view of the world-wide strain on environmental resources, cannot possibly conform to present architectural ideals. Unless current increases in population are brought to an abrupt stop, by a reversal in the expectation of life figures, we may as well recognise that we are about to enter upon what may be termed a second "mining camp" phase.

The ills arising from the unplanned, untidy nature of nineteenth-century methods can only be avoided by careful preparatory study, which ought already to have been undertaken.

The nature of the projects in which such new forms of urban pattern would be utilised may be broadly indicated as follows: Major capital works, construction camps; the development of exhaustible resources; the rotational cropping of tropical rain forest products; desert reclamation; ocean utilisation, shore bases adjustable to fish shoal migrations.

Each of these has a different pattern and a varying life. Certain of the capital works camps may eventually develop into permanent centres. The new mining town is to be wholly transitory; it should not leave a trace of previous occupation on the site. In the Dominions, in the vicinity of exhausted mineral veins, all the decayed paraphernalia of "economic man" can usually be found.

In the case of forests, movement of the labour force must take place behind the mobile plants, converting to dietary and industrial uses the rapidly growing tropical vegetation. Use in the deserts would entail wide deployment, as the work of rehabilitation moves forward all along the periphery towards the inner fastnesses.

The time will eventually come when the annual resettlement rate must equate with the natural increase of 20 to 30 million, as well as the normal routine movements of the working force already engaged on projects.

Wartime techniques of mobility in jungle and desert terrains, of which the American engineers were such masters, must be and are being adapted to civilian use. If those responsible for initiating the development projects, which ought to be completed within the next three decades, know that they can use techniques in which any mistakes in location can be corrected expeditiously and cheaply, they will be less hesitant than if they are content to use traditional urban forms, which involve the burying at fixed locations underground of a high percentage of the total capital outlay.

In sum, if urban planners will concede the assumption that an impending age of migration is on us, then the techniques employed must be adapted to the spirit of the pioneer, venturer and seafarer.

OFFICIAL NOTIFICATION

Used Sleepers Free of Licence

The Ministry of Materials announces that the Railway Executive has available for sale at present good supplies of those grades of used sleepers and crossing timbers (Grades 5 and 6) which they are in the habit of disposing of to the public.

Used sleepers and crossing timbers being adzed and bored are outside the definition of "timber" contained in the Timber Control Order, and the Timber Control states that in future used sleepers and crossing timbers may be acquired, supplied, used and consumed without licence.

Users of secondary sleepers and crossing timbers (i.e. new sub-standard, which are still subject to licence, and used relayables Grades 1 to 4) should in future apply to their sponsoring Government department for a T.C.3/8/CPL licence if they intend to use new sub-standard, or for a letter of authority if they intend to use Grades 1 to 4 relayables. In the latter case the application should be in the form of a letter stating the quantity and grade of relayables applied for and the purpose for which they are required.

No licence or letter of authority is required for Grades 5 and 6 used sleepers and crossing timbers.

NEWS IN BRIEF

Railway Charges

A revised "Scale of Railway Standard Charges" has been issued by the Railway and Shipping Publishing Co., Ltd., 12, Cherry-street, Birmingham 2. Priced at 15s., it shows without calculation the present-day standard rate for any class of goods to a destination within 750 miles radius.

Coronation Plaques

Lorries belonging to the delivery fleet of Rowe Brothers and Co., Ltd., builders' merchants, of Birmingham, have each been adorned with a special plaque bearing a crown and the words "Coronation 1953." These will remain on the vehicles throughout the coming year.

Crafts Exhibition

An exhibition of industrial design, weaving and bookbinding is being held at the Crafts Centre of Great Britain, 16-17, Hay Hill, Berkeley-square, W.1, until February 20. The Crafts Centre, a non-profit-making body, comprises the main craft societies, and aims at bringing the work of artist craftsmen to the notice of the general public by means of free exhibitions.

One-Pipe Plumbing

The principles to be followed in designing various sections of the single-stack system of plumbing are outlined in Building Research Station Digest No. 49, "One-Pipe (Single Stack) Plumbing for Housing: Part II," published by the Stationery Office, price 3d. Some explanatory notes on siphonage and back pressure are given, and it is emphasised that accuracy in design is much more important here than with one-pipe systems including vent-pipes.

Housing Record

Birmingham Corporation established a post-war housing record of 4,744 municipal houses completed and handed over during 1952. The total was made up of 2,231 traditional houses and 2,513 non-traditional. Alderman A. F. Bradbeer, chairman of the house building committee, says that the city will probably provide 5,000 more houses during 1953, but that this would almost certainly be a peak figure because the number of housing sites is decreasing.

Shortage of Steeplejacks

Concern at the lack of suitable boys desiring to enter the specialised trade of the steeplejack was expressed by Mr. Malcolm Macdonald, chairman and managing director of M. Macdonald and Co. (Steeplejacks), Ltd., Nottingham, at the annual meeting of the company in Nottingham on December 24. Mr. Macdonald went on to say that a great dearth of steeplejacks existed in Britain today, and that there had never been enough competent steeplejacks to meet the full requirements of the trade. The company was proposing to award a trophy for the best young steeplejack of the year, which would be presented to him, together with a monetary award, and would remain his property for 12 months. Should he win the award, to be known as the "Congreave" trophy, for three consecutive years, it would become his sole property. The chairman then announced that a bonus of 7.75 per cent., based on the gross wage of each man for the year (equivalent to an additional four weeks' wages), would be made on the first pay day in 1953.

Housing in Glasgow

A quarterly bulletin distributed to all employees of the Glasgow Corporation Housing Department is "Housing News." The latest issue contains facts and figures about Glasgow's housing achievements during the last year as well as news of personalities and activities within the department.

Newark Council's Decision

Newark Housing Committee are to consider a return to open tenders for council house contracts, following the reference back of a proposal at the town council meeting on December 29 that 200 houses on the Lawton-road estate should be allocated to two firms on a negotiated basis.

Installation of Modern Grates

More than 90 builders' operatives and local authority fixers in Bury St. Edmunds, Newmarket, Sudbury, Ely, Stowmarket, Thingoe, and Mildenhall, attended the series of one-day courses on the building of flues and correct installation of modern domestic solid fuel appliances arranged in conjunction with the Coal Utilisation Council at the Bury St. Edmunds Technical Institute, from December 29—January 2.

Mistake in Tender Price

Informed that a local firm had told the borough surveyor that it had made an error of over £1,311 in its accepted tender for work at a school which is shortly to be opened, Warrington Education Committee has approved a resolution of the sites and building committee "That the explanation by the firm for the error so made be accepted and that, to meet the circumstances of the case, an ex gratia payment of £1,000 be made . . . towards the stated difference." The correct tender figure was £4,896.

Reinforced Plastics Committee

The British Plastics Federation, which has been considering provision in its organisation for firms interested in low-pressure reinforced plastics, reports a decision of the Council to form a special technical committee consisting of representatives from the appropriate groups of the Federation. The Committee, which will be responsible to the main Technical Committee, is to be known as "The Glass and Asbestos Fibre Reinforced Plastics Technical Committee." It will hold its first meeting at the Federation offices, 47-48, Piccadilly, W.1, on January 15. Firms eligible for representation on the Committee are those carrying out experiments or production on reinforced plastics or materials for their manufacture, such as resins or fibres.

Home-ownership and the National Economy

Mr. Hubert Newton, chairman of the Building Societies' Association, in a New Year message in "The Building Societies' Gazette," says that instrumental as they were in providing homes for vast numbers of families between the wars, building societies are conscious today of millions more who are hungry for security of tenure in a home of their own. "By putting its money on the common man and the building societies, the State is more likely to reach its housing goal," he declares. "A great increase in home-ownership would not only save a vast expenditure which at present has to be met by the Exchequer or by local authorities; it would effect many consequential economies and tend to lighten the burden of taxation bearing so hard upon industry and trade."

TRADE NEWS

Cast-Lead Work

The cast-lead fascias and the copper linings to flower boxes at Bankside House (illustrated in our issue of January 2) and the cast-lead rain-water pipes and sockets at Bedford College for Women (shown in this issue) were supplied by Messrs. Stoner and Saunders, Ltd., of 20-26, Woodfield-road, W.9.

Steel Roofing Clip

A steel roofing clip, claimed to be applicable to all forms of sheet covering to buildings, is being produced by the British Screw Co., Ltd., 153, Kirkstall-road, Leeds, 4. Called the "Oakley" clip, it is designed for use with electro-galvanised bolts and round, diamond or cone washers. It is threaded to take the bolt which eliminates the use of a nut and is said to speed up erection. The only part exposed to the weather is the head of the bolt.

Electrical Accessories

A catalogue issued by M.K. Electric, Ltd., Wakefield-street, N.18, contains a selected part only of their range of electrical accessories for modern housing schemes, but has been designed to give a complete picture of the items. Among these are the cooker control units introduced by the company in 1948. This conforms to the British Standard, and is enclosed in a seamless cover of rust-resisting steel, bonderized for paint adherence, and finished in stove-enamelled cream. There is a choice of five conduit entries in the form of removable clip-in discs.

Tractor and Scraper Units

Now in production at the Newhouse, Glasgow, works of Euclid (Great Britain), Ltd., is their 12 cu. yd. (16 cu. yds. heaped) capacity tractor and scraper unit. This incorporates a diesel-engined tractor, basically of the same design as that incorporated in the "Euclid" bottom dump wagon, and provides power and traction for fast loading on soft fills. The hydraulic-assisted steering is understood to be light and positive in operation. The scraper unit is hydraulically operated and designed for quick filling and dumping with an open top bowl which can be loaded by excavator when required. These units are distributed and serviced by J. Blackwood Hodge and Co., Ltd., 24, Berkeley-square, W.1, at home and overseas.

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Price Reductions

An announcement has been made by the Quickstryp Chemical Co., Ltd., 57, Kingsland High-street, E.8, that, following decreases in the prices of materials and containers, prices have been reduced for their "Quickstryp 31, 33, 34, 35 and 41." The price for "Quicker-stryp 32" remains unaltered.

Furnace Insulation

The development of refractory firebrick concrete for the construction, repair and upkeep of furnaces, flues and similar structures has made considerable progress during recent years. A pamphlet published by the technical section of the Lafarge Aluminous Cement Co., Ltd., 73, Brook-street, W.1, gives details of its properties, application and reinforcement, and may be obtained from them on request.

PERSONAL COLUMN

VISCOUNT PORTAL OF HUNGERFORD, K.G., G.C.B., O.M., D.S.O., M.C., a Director of the British Aluminium Co., Ltd., has succeeded Mr. R. W. Cooper, M.C., as chairman as from January 1. MR. E. F. O. GASCOIGNE has been appointed a Director.

The United Steel Companies, Ltd., have announced the following impending changes at the Appleby-Frodingham branch, Scunthorpe:—ENGINEER REAR-ADMIRAL C. W. LAMBERT, C.B., who is now general works manager, will retire at his own request on June 30 next. It is intended that he shall be succeeded by MR. ALBERT JACKSON, who is at present works manager (steel) and deputy general works manager. MR. T. P. LLOYD, B.Sc., A.I.M., T.D., has been appointed assistant works manager (steel) in which capacity he will assist Mr. Jackson. On July 1 next, consequent upon the appointment of Mr. Jackson as general works manager, Mr. T. P. Lloyd will be appointed works manager (steel).

The United Steel Companies, Ltd., have also announced that MR. C. R. BLICK, M.B.E., T.D., has been appointed assistant commercial manager of the Workington Iron and Steel branch.

The United Steel Companies, Ltd., announce the following changes at the Steel, Peech and Tozer Branch, Rotherham: MR. V. WATKINS, at present maintenance manager, is to be appointed deputy chief engineer, and MR. C. WILKINSON is to be appointed cold rolling mill manager.

MR. ROBERT R. JOLLIFFE, previously with Messrs. Wm. Dibben and Son, Ltd., of Southampton and Bournemouth, is soon to join the Standard Range and Foundry Co., Ltd., of Watford.

MR. G. WOODS has been appointed hon. secretary and treasurer of the Fan Manufacturers' Association, Ltd. All future communications should be sent to Copthall House, Copthall-avenue, E.C.2.

British Insulated Callender's Cables Ltd., announce the appointment of two branch managers to replace MR. R. S. GOUGH (Bristol), and MR. T. R. THOMAS (Cardiff), who have both retired. The new branch manager at Bristol is MR. T. L. PURVES, who joined B.I.C.C. in 1947 as a sales engineer with the Capacitor Division. MR. L. R. GREET, who has been appointed branch manager at Cardiff, was formerly chief assistant at that office.

MR. C. M. LANGLEY, nephew of Mr. F. A. Langley, has joined the board of Stelcon (Industrial Floors), Ltd., Cliffords Inn, E.C.4.

MR. B. INKLEY, a director of Tentest Fibre Board Co., Ltd., Barnet, has retired. He joined the company as a technical adviser in 1921 and was partly responsible for the initial technical development of the industry in this country. Mr. Inkley was also responsible for patenting and marketing the first metal fixing system to be successfully applied, and was one of the originators of the committee that formed the Metal Fixers Association which recently issued its first Code of Practice.

OVERSEAS BUILDING

[From Our Own Correspondents]

Angola.—During the next six years, 1953-1958, over £36m. is to be spent on the Portuguese National Development Plan for Angola, Africa. Hydro-electric projects are to be initiated at Mabubas, where the first phase is expected to supply power to Luanda by next August. At Biopio a power project will be erected for the city, port and region of Lobito. . . . Requests for tenders and equipment for the construction of a bridge-dam at Matala in the Upper Cunene Valley have now been made. The area near the Deque de Braganza Falls on the Cuanza River is being studied for its power potential. . . . The Luanda Railway is to be extended 97 kilometres from Malange to Lui to service the cotton-producing district of Cassange, and the Mossamedes Railway is to be extended 600 kilometres from Sa da Bandeira to Cuito Canavale, which is 250 miles from the Northern Rhodesian frontier. It is worth noting that about one-third of the total development expenditure proposed is to be devoted to drainage, irrigation and settlement projects, and firms specialising in this type of work should now communicate direct with the Portuguese Government for fullest details.

**Australia.*—The closing date for the receipt of tenders for the construction of a railway bridge across the Brisbane river at Indooroopilly (see *The Builder* of November 28) has been postponed for one month, from March 2 to April 2. Telephone inquiries should be made to Trafalgar 8855, Ext. 2418.

**British East Africa.*—The following announcement was published in the "East African Standard" of December 12 last:—Tender documents will shortly be issued for extensions to H.M. High Court, Kampala. The estimated value of the work is £50,000, and all contractors desirous of being considered for selection to tender should make application in writing, giving particulars of contracts recently executed, to Gobb and Powell, P.O. Box 988, Kampala.

Greece.—A number of factories are to be built in Greece. Initial plans for the installation of a sugar factory in Salonika are progressing satisfactorily. Size of the factory can be estimated from the fact that 80,000 tons of sugar are to be extracted yearly from local sugar beet. . . . A petroleum refinery is also to be erected in the Athens-Piræus area. So far, very little has been publicised about this project. . . . Work on a large steel mill at Elefsis started recently.

India.—India's £30m. plan for modernisation and development of major ports has now been outlined by the Ministry of Transport. Port facilities for the oil refineries at Kandla Port will cost about £8m. of this money, the remainder being spent on five existing projects at Calcutta, Bombay, Madras, Cochin and Butcher Island. It has also now been officially stated that the sum of £20¼m. will be spent over five years for the provision of national highways. Another £750,000 is to be spent on the development of village roads to facilitate inter-village transport. . . . A German firm has been awarded the contract for the setting up of a coke-oven plant at Sindri at an est. cost of £1,760,000. The plant is to be completed within 22 months and will have a capacity of 600 tons a day.

* From the Board of Trade Special Register Information Service.

**India.*—The Government of West Bengal propose building a new satellite township at Kanchrapara, 28 miles to the north of Calcutta. The site chosen is adjacent to Kanchrapara railway station and was previously an American army base. It lies on the main line from Sealdah (Calcutta) to Ranaghat and is readily accessible by rail, road and river. The total area of the site chosen is over 10,000 acres, of which 6,305 acres, lying within the peripheral road encircling the urban limits to the north of the city of Calcutta will be developed. The remaining 4,000 acres will form a green belt. The 6,305 acres to be developed have been provisionally allocated as follows: 4,225 acres for buildings, 1,185 acres for roads, 305 acres for parks and open spaces, and 590 acres for lakes and jheels (fishponds). It is expected that the development of the whole satellite town will take 10-12 years. All telephone inquiries should be made to the Board of Trade Commercial Relations and Export Department, Tel.: Trafalgar 8855, Extension 2418.

Luxembourg.—The investment of foreign capital is being inaugurated by the Luxembourg Government to sponsor new industries which will have to be set up. This means that a number of plants will be erected in the course of the next few years. Already a U.S. firm is considering setting up a nylon fur factory, while a German firm is investigating the possibilities of building a motor car assembly plant. Existing industries are to be expanded and a number of factories will, therefore, be extended to cope with requirements of Luxembourg's present economy. . . . The tourist industry, which is fast becoming Luxembourg's second most remunerative industry, is leading to the building of new hotels and restaurants.

Saudi Arabia.—A British firm working in partnership with a Saudi Arabian firm has received contracts for several large houses and palaces in Jedda and Riyadh. A construction team is now working on a palace in the centre of Riyadh as well as on the new Saudi Ministry of Foreign Affairs in the same city. . . . Tenders are also being accepted by the Saudi Arabian Government for the construction of a road from Mecca to Taif as well as for a small dam at Taif. . . . The initial survey of the proposed Riyadh-Jedda railway and auxiliary projects is being undertaken by an American firm, the International Engineering Company. British firms interested in building of this type are urged by British authorities in Saudi Arabia to establish contact with the authorities concerned well in advance especially as subsidiary contracts may be open to private or public tender before tenders are called for the actual construction work.

South Africa.—Work is in progress on a site of 200 acres seven miles east of Pretoria, on the construction of modern laboratories and a cyclotron for the Council for Scientific and Industrial Research, South Africa's State-sponsored research organization. About £500,000 has already been voted by Parliament for these laboratories and the work will take several years to complete.

Tangier. — The Tangier Legislative Assembly has approved the spending of $4½m. on port extensions. The inner quay is to be extended by 70 metres, linking it up with the existing quay known as PM 400, and this, in turn, is to be extended by a new quay of 110 metres. The big jetty is also to be developed by 200 metres. Tenders will be called for when the necessary funds have been obtained through a loan which the Administration is seeking at the present time.

Turkey.—Tenders have been called for by the Toprak office at Haydarpasa in Turkey for the construction of a 34,000 tons capacity silo. Copies of specifications can be obtained from the Toprak office at Ankara. . . . Istanbul's first real underground will cost an est. £21¼m. according to the low bid submitted by a French contracting firm whose specifications are being studied by the Istanbul municipality. The proposed underground line will provide rapid transport between the Beyoglu and Fatih districts of Istanbul, alleviating the present heavy commuter volume by trolley and bus over the much-used Galata Bridge across the Golden Horn.

Uruguay.—The Uruguayan Parliament is considering a project to build a large hydro-electric works on the Rio Negro at Rincon Baygorria, below the present Rincon del Bonete dam. The financing of this work will necessitate floating an internal loan of 165m. Uruguayan dollars, and assistance will also be asked from the International Bank for Reconstruction and Development to finance the import of the necessary equipment from abroad.

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Cost of Police Houses

The Hampshire Police Authority, in its last report, gives interesting information on the building of new houses and the improvement of the older police houses by the provision of bathrooms and proper sanitation. A tender was recently accepted for building three pairs of standard houses near Winchester at a cost of over £2,100 each. The total value of tenders for the construction of 120 police houses in the County of Southampton and the County of the Isle of Wight which have been accepted since April, 1948, is £275,733. The cost of providing a bathroom at Godshill, Isle of Wight, is £285, and for a water closet £55.

THE SCOTTISH BUILDER

Housing Programme in 1953

AS part of the Government's plans for an expanding housing programme next year local authorities must try to get more houses from the same amount of labour and materials. This is the central theme of a circular on housing progress in 1953, briefly referred to in our last issue, that has just been issued by the Department of Health for Scotland (D.H.S. Circular No. 117/1952).

In the circular the Secretary of State congratulates local authorities, the building industry and the manufacturers of building materials on their contribution to the success of the 1952 building programme.

But, the circular adds, Scotland is still a long way from satisfying her needs and "the Secretary of State asks local authorities to do all they can to expand the programme further in 1953 and future years."

A three-point plan to help authorities achieve this end is outlined:

Get more houses from the same labour and materials by cutting out waste, building more space-saving houses, and by making use of alternatives for scarce materials.

Reduce the time taken to build an individual house. Builders should be given enough work to enable them to plan their contracts over long periods; at the same time care should be taken to avoid over-loading local industry and having too many houses standing about unfinished.

Swell the total building programme in individual districts by recruiting small builders not at present engaged in house building who might be willing to do so for sale.

Elaborating on these themes the circular says that if more houses are to be completed in 1953 than in 1952 there must be more labour and materials, or existing supplies must be made to go further. The Government will continue to make every effort to maintain and if possible to increase supplies to match the expanding programme.

But the sources of additional labour are not inexhaustible and the supply of some of the basic materials cannot be easily increased (e.g., timber imports cannot be considered apart from balance of payment requirements; cement is needed for defence, and is a dollar-earning export). "The greatest emphasis must, therefore, be laid on trying to produce more houses from the same amount of labour and material."

All waste must be avoided. "Cases have recently been brought to the Secretary of State's notice involving unwarranted use of large quantities of bricks for internal partitions, boundary walls, screen walls and for excessive underbuilding that could be avoided by site levelling."

There must be economy in scarce basic materials, particularly bricks, timber and cement. The Department of Health intend shortly to issue guidance about this. More space-saving houses which save labour and materials, without affecting living standards, should be built. Ceiling heights should be of the approved 7 ft. 6 in. This releases bricks for additional houses. More use should be made of alternative materials. The construction of unnecessary service roads, making heavy demands on cement, should be avoided. Too often concrete is used for paths where a macadam or gravel surface would suffice.

Rate of Building

Present average completion times of 11 months for a non-traditional house and 17 months for a traditional house are too long, says the circular. In this connection the "greatest single step that can be taken to shorten the period of building is to avoid overloading the local industry.

"When too many houses are brought under construction at the same time labour and materials are dispersed, capital is locked up unproductively, the productivity of labour may be lowered, and too many houses stand by unfinished. Contracts should, therefore, be timed to avoid on the one hand too great a load on the available contractors, and, on the other hand, serious breaks in continuity."

One remedy suggested by the circular is to let larger contracts which might be spread over longer periods. This would give builders the opportunity to plan the supply of materials, and the same labour force might well achieve higher productivity over the longer run. "If a local authority wish to place a larger contract for houses to be built over a longer period, say, two years, and need an additional instalment of houses to enable them to do so, the Secretary of State will be ready to consider favourably any application they may make."

On larger contracts of this kind, the circular points out, local authorities may find it an advantage to adopt bonus and penalty clauses.

"When houses are brought under construction, the local authority should satisfy themselves that the site organisation is efficient and should do their utmost to see that the houses are carried through to completion without undue delay, especially delay between the several trades. This is primarily a matter of good planning and careful watch on the contractor's progress once the job is started."

Private Building

The circular reminds local authorities that they may issue private building licences up to any number that the local industry can absorb. Apart from the obvious financial gain to the taxpayer and to the local authority, there is the additional advantage that many small builders not at present engaged in house building would be willing to do so for private sale, with a consequent addition to the total building programme in the district.

"The Secretary of State hopes that these suggestions will help local authorities so to plan their building programmes as to secure the greatest possible progress with the available resources and that, as a result of their efforts in this direction, the output of completed houses in 1953 will exceed the good record just achieved in 1952."

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New University Building

IN CONNECTION with the projected new building for the Faculty of Arts at Glasgow University, a limited architectural competition for designs was held recently by the University Court. The Assessor, Mr. A. Graham Henderson, has awarded the first place to the design submitted by Mr. W. N. W. Ramsay, A.R.I.B.A., a member of the firm of Messrs. M'Nair, Elder and Ramsay, architects, of Glasgow.

Aberdeen's Development Plan

THE PROPOSED DEVELOPMENT PLAN for the city of Aberdeen, prepared by the town-planning consultants Messrs. W. Dobson Chapman and Partners, of Macclesfield, has just been published, and is reviewed on page 92.

Mr. Dobson Chapman and his associates base much of their planning on a forecast by the Department of Health that Aberdeen's population will reach its peak in, or around, 1976 with a figure of 198,000, after which it will begin to decline. "Obviously it would be a mistaken policy," they state, "to suggest spreading out the residential zones at low densities for the whole of the possible total of 200,000 persons and then finding if this figure is not realised, or is eventually achieved, and then tends to decline, that the realised densities are much too low and that the land has been squandered unnecessarily. Rather it would be preferable to tolerate relatively high densities during the peak period and then allow more elbow room to be gained as time goes on."

Their most striking proposals are the shift of the fish market and ancillary industries to the south of the Dee; removal of the granite industry to Tullos, also south of the river; transfer of the railway station to the north side of Guild-street, and linking it directly with a rebuilt Palace Hotel; creation of a central bus station; cutting of an inner-ring road round the city centre to relieve congestion in Union-street; throwing a bridge over the harbour mouth to enable traffic from Peterhead and Fraserburgh to bypass the city on its way south; construction of a new civic centre at the east end of Union-street; creation of a new square at the west end of Union-street, with St. James' Church as a salient feature; and the building of the beach boulevard with high

blocks of flats to screen the gasworks, for which they have been unable to find an alternative position.

Master Builders' Dinner

THE WHOLE of Edinburgh's Royal Mile which required building would be dealt with in the next three or four years, said LORD PROVOST JAMES MILLER, when he spoke at the recent annual dinner of the Edinburgh and District Master Builders' Association. There were about half a dozen schemes of reconstruction in the Royal Mile on which work had started, or which were in an advanced planning stage.

"We are not satisfied with doing that only in the Royal Mile," continued the Lord Provost. "We have made considerable progress in other directions. We have appointed outstanding Edinburgh architects to submit proposals for redevelopments in such a way as will maintain the character of such places as Newhaven, and Cramond and Dean villages.

"If these materialise, as we hope they will, then we will move on from there to other sections. We visualise something at the shore of Leith, and in Leith itself progress will be made with demolitions and reconstructions."

Within a few months he trusted that the town plan would be available to the public. It was now in an advanced state of completion. None of them need have any fear from it.

Proposing the toast of the association, MR. JOHN CAMERON, Q.C., congratulated them on the record which the building industry had established not only in Edinburgh but throughout the country as a whole. With man-power reduced by something like 20,000 the industry had exceeded in this year all records for domestic house building and other forms of construction. Translated into terms of tonnage, 300,000 tons more cement and other materials had been worked, and 600m. more bricks had been used.

"That is a remarkable record," he commented, "and shows that the building industry is facing, and facing adequately, one of the major challenges of the present day, namely the provision of shelter, which is only equalled in importance by the twin challenge of the need for the provision of food."

MR. ROBERT SMITH, president of the Association, in his reply, said that in the last few years many additional burdens had been placed upon the industry; guaranteed time, increased National Health Insurance benefits, holidays with pay, heavier taxation. With the exception of the last named, he thought the benefits which these conferred were good and desirable. They helped to dispel the element of fear, and they fostered a greater sense of security in the operative. They would go a long way to assist in the smooth working of the industry.

Those increased benefits, which added 13 per cent. to basic wage costs, had not been accompanied by a comparable increase in output. That, to his mind, was the real root of the difficulties with which they were faced at present. If the community were not to suffer, increased basic effort was essential. Employers could greatly assist by better organisation and more efficient management. If they were left free and unfettered they could surmount any difficulties which might face them. To counter rising costs the old-fashioned remedy of hard work had much to commend it.

Glasgow's Housing Progress

SINCE 1919 over 75,000 permanent municipal houses have been erected in Glasgow, and since the last war more than 20,000 have been completed. These figures are given in the bulletin issued to employees of the Housing Department in the city. MR. A. G. JURY, director of housing, states that at the end of November the post-war number of houses completed had risen to 21,517. Over half of the post-war completions had been contributed by the direct labour organisation.

Glasgow still led the cities, said Mr. Jury, and gave the following figures for the post-war period to September 30 last:

Glasgow, completed municipal houses, 20,145; under construction, 7,744; Birmingham, 13,655 and 3,278; Manchester, 10,328 and 2,560; Bristol, 10,074 and 1,273; Liverpool, 9,664 and 2,477; Sheffield, 7,514 and 1,406; Plymouth, 6,204 and 673; Cardiff, 5,381 and 1,413; Edinburgh, 5,297 and 1,832; Nottingham, 5,250 and 1,578; and Leeds, 4,933 and 2,414.

Although Glasgow's progress position was at present unequalled, continued Mr. Jury, there must be no complacency.

NEW BUILDINGS

Argyllshire.—C.C. has plans in course of preparation for a two-storied addition to the Grammar School of Dunoon. The architect is W. R. Rocher (F.), County Offices, Cowal Hotel, West Bay, Dunoon.

Blantyre.—Plans to be prepared for new chapel buildings to be erected at St. Joseph's, for which the architects are Frederick Smith & Partners, 4, Regent-st., The Cross, Hamilton.

Coatbridge.—Lanarkshire C.C. to have plans prepared for a new primary Catholic school at the Kirkwood housing site. The architect is William Watt (F.), County-chbrs., Albert-st., Motherwell-Wishaw.

Dumbartonshire.—Plans to be prepared for new primary school at the Mill o' Haldane housing site. The architect is Benjamine P. Gibb, F.R.I.A.S., County-bldgs., College-st., Dumbarton.

Edinburgh.—Warrant granted at Dean of Guild Court for the erection by Ferranti, Ltd., of a laboratory block at Crewe-rd. North at a cost of £190,000. Work on the erection of the building will commence shortly.

A NEW PUBLICATION

CHURCH ROOF COVERINGS

A survey of alternative materials and their method of use, prepared by a committee set up by the Central Council for the Care of Churches in conjunction with the Society for the Protection of Ancient Buildings.

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Falkirk.—Corporation propose a new scheme of shops, est. to cost £36,000, which are to be erected at the Whitecross housing site. The architect is A. C. M. Carrol (A.), Master of Works Offices, West Bridge, Falkirk.

Glasgow.—Plans in hand for four new classrooms to be erected at the Coiston junior secondary school. The architect is John MacNab (F.), 129, Bath-st., Glasgow.

Glasgow.—Plans to be prepared for new Catholic Oratory, also new house, etc., for which the architects are Gillespie, Kidd & Coia (A.), Wellington-chbrs., Waterloo-st., Glasgow.

Glasgow.—Plans to be prepared for new special school which will be erected at Hallside-rd. housing site, for which the architect is John MacNab (F.), 129, Bath-st., Glasgow.

Glasgow.—Plans in hand for new showrooms, offices and factory, etc., to be erected at Elderslie-st. The architect is A. Stewart, 149, Elderslie-st., Glasgow, W.C.

Glasgow.—Plans to be prepared for new church halls which are to be erected at Bergher-st. The architect is D. Baird, 9, Gilmour-st., County-pl., Paisley.

Lanarkshire.—Plans in hand for new concrete reservoir to be constructed at Ligbrannock, Newarthill site. The architect is Clark Fyfe, Corporation-chbrs., Motherwell-Wishaw.

Lanarkshire.—Plans for new buildings at the Newmains gasworks are in the hands of the National Gas Board Architects, 36, Robertson-st., Glasgow.

Lanarkshire.—Plans to be prepared for new commercial garage and storage buildings, also additions to tunnel at Cadder. Plans by the architects of the Marley Tile Co., Ltd., Bishopbriggs.

Shotts.—Plans in hand for new halls to be erected at Northfield-ave., Springhill, for which the architect is S. W. Bunnage, 44, Union-st., Stonehouse.

NEW COMPANIES

THE FOLLOWING NEW COMPANIES, registered in England, have been announced by Jordan and Sons, Ltd., company registration agents.

C. and A. Barber, Ltd. (513982.) Reg. Dec. 6, 6, Little Portland-st., W.1, bldrs., etc. Nom. cap.: £500. Subs.: W. Roberts, 210, Ladbroke-gr., N. Kensington, W.10.

E. A. Edwards, Ltd. (514003.) Regd. Dec. 6, bldrs., etc. Nom. cap.: £1,000. Sub.: G. A. Crook, 43, Beresford-rd., Hornsey, N.8.

H. N. Cansick (Builders), Ltd. (514032.) Regd. Dec. 8, 4a, Carfax, Horsham, Sussex. Nom. cap.: £2,000. Dirs.: H. N. Cansick and Mrs. E. Cansick, 2, Beech-dr., N.2.

A. G. Gardiner and Son, Ltd. (514110.) Regd. Dec. 11, 15, Pratt-st., Camden Town, N.W.1, bldrs., decorators and plumbers. Nom. cap.: £2,000. Dirs.: A. G. Gardiner, Mrs. V. M. Gardiner and R. H. Gardiner, 15b, Swains-la., Highgate, N.6.

Kingston Plumbers, Ltd. (514129.) Regd. Dec. 11, Ferndale-ave., Willerby, E. Yorks. Nom. cap.: £1,500. Dir.: R. L. Edmond, 224, West Ella-rd., Kirk Ella, Yorks.

Shaw's (High Storrs), Ltd. (514137.) Regd. Dec. 11, bldrs., contractors, etc. Nom. cap.: £2,500. Dir.: A. Shaw, Senr., 181, High Storrs-rd., Sheffield, 11.

Allison's Brighter Homes, Ltd. (514147.) Regd. Dec. 12, 3, Queen's-rd., Farnborough, Hants, bldrs., etc. Nom. cap.: £5,000. Dirs.: R. H. Allison, Mrs. M. S. Allison and Mrs. J. M. Nicholls, 3, Queen's-rd., Farnborough, Hants.

David Crawford, Ltd. (514152.) Regd. Dec. 12, 66, Albion-st., Leeds, painters and decorators, etc. Nom. cap.: £3,000. Dirs.: D. E. Crawford and Mrs. H. M. Crawford, 62, Thorn-la.

E. Coules and Son, Ltd. (514153.) Regd. Dec. 12, 6, Dolben-st., S.E.1, constructional, electrical and genl. engineers, etc. Nom. cap.: £100. Dir.: E. H. Butler, Silver Timbers, Furze Vale-rd., Headley Down, Hants.

F. G. Smith and Co. (Asfordby), Ltd. (514154.) Regd. Dec. 12, Main-st., Asfordby, Melton Mowbray, Leics., civil engrg. contractors. Nom. cap.: £15,000. Dir.: H. H. Frier, Newlyn, Asfordby, Melton Mowbray, Leics.

Gale Engineering (Doncaster), Ltd. (514157.) Regd. Dec. 12, Midland Bank-chbrs., 1, High-st., Doncaster, constructional and genl. engineers, etc. Nom. cap.: £1,000. Dir.: G. Gale, 20, Central-av., Woodlands, Doncaster.

L. G. Forster (Construction), Ltd. (514202.) Regd. Dec. 13, 56, Whitton-rd., Hounslow, Mdx., civil engrg. contractors, bldrs., etc. Nom. cap.: £2,000. Dirs.: L. G. Forster and Gladys F. Forster, 2, Mulgrave-rd., Ealing, W.5.

R. W. Burchfield, Ltd. (514210.) Regd. Dec. 13, Liverpool-chbrs., Worthing, bldrs., contractors, etc. Nom. cap.: £1,000. Dirs.: R. W. Burchfield and Mrs. J. B. Burchfield, 158, King Edward-av., Worthing.

Shoppards, Ltd. (514212.) Regd. Dec. 13, shopfitters and carpenters, etc. Nom. cap.: £1,000. Dir.: H. G. Blackmore, 32, Morthey-av., Cheam, Surrey.

G. D. Ponsford and Son, Ltd. (514236.) Regd. Dec. 15, civil, elec. and heating engrs., etc. Nom. cap.: £100,000. Dir.: W. G. D. Ponsford, 193, Grove Green-rd., Leytonstone, E.11.

Acme Welding and Constructional Engineering Co. (London), Ltd. (514223.) Regd. Dec. 15, 181, Knightsbridge, S.W.7. Nom. cap.: £5,000. Dirs.: W. Tait and Mrs. D. A. E. Tait, 27, Rutland-st., S.W.7.

Robert Watson and Co. (Successors), Ltd. 514311.) Regd. Dec. 17, constructional engrs., bldrs. and contractors. Nom. cap. £250,000. Sub.: W. Muirhead Watson, 903, Chorley Old-rd., Bolton.

Rapley and Milsom, Ltd. (514267.) Regd. Dec. 16, 139, Chaldon-rd., Caterham, Surrey, bldrs. and contractors, etc. Nom. cap.: £500. Dir.: A. H. J. Milsom, 139, Chaldon-rd., Caterham, Surrey.

E. Newton, Ltd. (514287.) Regd. Dec. 17, 50, St. Gabriels-rd., N.W.2, bldrs. and contractors, etc. Nom. cap.: £1,000. Dir.: E. Newton, 50, St. Gabriels-rd., N.W.2.

Heatlight (Birmingham), Ltd. (514291.) Regd. Dec. 17, 11a, St. Albans-rd., Watford, Herts, heating, ventilating and lighting engrs. and contractors, etc. Nom. cap.: £500. Dir.: G. A. Davenport, Dormers, Avenue-rd., Pinner, Mdx.

Henry F. Mole and Co., Ltd. (514292.) Regd. Dec. 17, The Vineries, Chester-le-Street, Co. Durham, bldr. and contractor. Nom. cap.: £7,500. Dir.: H. F. Mole, The Vineries, Chester-le-Street, Co. Durham.

W. E. Alford (Llanelly), Ltd. (514321.) Regd. Dec. 17, 47, Station-rd., Llanelly, plumbers, engrs., etc. Nom. cap.: £3,000. Dirs.: W. J. P. E. Alford and Mrs. A. G. Alford, 47, Station-rd., Llanelly.

Whiting Plastering Contractors, Ltd. (514324.) Regd. Dec. 17, 21, Ashdon-rd., Bushey, Herts. Nom. cap.: £100. Dirs.: H. Whiting and Mrs. I. G. Whiting, 21, Ashdon-rd., Bushey, Herts.

Sharp and Law (Decorations), Ltd. (514371.) Regd. Dec. 18, painters, decorators, etc. Nom. cap.: £2,000. Dir.: T. Law, 7, Hillway, Tranmere Park, Guiseley, nr. Leeds.

Springett and James, Ltd. (514401.) Regd. Dec. 19, 16, Highfield-av., Kingsbury, N.W.9, bldrs., decorators and plumbers. Nom. cap.: £2,000. Dir.: A. G. Bramble, 36, Uphill-dr., Kingsbury, N.W.9.

C. F. Toop, Ltd. (514407.) Regd. Dec. 19, Bailey Hill, Castle Cary, Som., bldr., decorator and contractor. Nom. cap.: £4,000. Dirs.: C. F. L. Toop and Evelyn B. Toop, Kosette, Galhampton, Yeovil.

L. T. Rees (Contractors), Ltd. (514415.) Regd. Dec. 19, bldrs., etc. Nom. cap.: £5,000. Dirs.: L. T. Rees and Ethel Rees, The Meadows, Glynneath, Glam.

C. Paine and Son, Ltd. (514408.) Regd. Dec. 19, 690, Lea Bridge-rd., E.10, civil engrs., public works contractors, etc. Nom. cap.: £10,000. Dir.: C. Paine, 160, Pembroke-rd., E.17.

Orchard and Moody, Ltd. (514441.) Regd. Dec. 20, 186, Tulse Hill, S.W.2, bldrs., etc. Nom. cap.: £5,000. Dirs.: S. R. Moody and Mrs. W. Moody, 80, King's-av., S.W.4.

Alex. Watson (Builders), Ltd. (514501.) Regd. Dec. 23. Nom. cap.: £5,000. Dirs.: A. D. Watson and Mrs. I. A. Watson, Gibside Lodge, Dunstonbank, Dunston, Gateshead, 11.

Northern Ireland Hospitals

The Northern Ireland Hospitals Authority spent more than £500,000 on buildings and plant in the year 1951-52, according to the Authority's fourth annual report just issued. The report states, however, that there remains much leeway to be made good to bring the Northern Ireland buildings up to the desired standard.

400,000 New German Homes

According to the Federal Ministry for Housing in West Germany, roughly four dwelling units were made ready for occupation every five minutes during 1952. The phrase "dwelling unit" covers flats, which are usual in Germany instead of separate family houses. No fewer than 400,000 such units were completed in the course of the year. In the past four years 5,500,000 persons have received a home. Since 1949 as many as 1,200,000 dwelling units have been built at a cost of between 13,000m. and 14,000m. marks, a three-year achievement which, the Ministry claims, is as great as in the eight years from 1924 to 1932, and gives the Federal Republic the lead over all other European countries. There remains, however, a lack of about 4m. dwellings, and it will be 10 or 15 years before the need is fully satisfied. The Ministry's figures include new construction, damaged dwellings which have been repaired, and other buildings adapted to housing.

The Builder

FUTURE CONSTRUCTION

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

JANUARY 9.

***†Wednesfield U.D.C.**—124 dwellings on Long Knowle housing site. T. Peacock, E. & S., Pennhurst, 29, Bolton-rd. Dep. £3 3s.

JANUARY 13.

***†Cardiff City C.**—New county primary junior school, Cwrt-yr-Ala. L. Patterson, A.R.I.C.S., 11, Cathedral-rd. Dep. £2 2s.

JANUARY 14.

***Wimbledon B.C.**—Renovation of slipper baths, Latimer-rd., S.W.19. B.E. & S., Town Hall. Dep. £2 2s.

JANUARY 15.

***†Cheshire C.C.**—Adaptations as residential special school for boys and erection of teachers' flats and bungalows at Grappenhall Hall, near Warrington. County A., Chester. Tenders by February 11.

***†Southampton C.B.**—Repairs to workshop roofs at Portswood transport depot. Boro' A. Dep. £1. Tenders by January 30.

JANUARY 16.

***†Southampton B.C.**—Extension to Hillfield Home for the Blind, Bassett-ave. Boro' A. Dep. £1. Tenders by February 12.

JANUARY 17.

***†Gravesend B.C.**—Conversion into 3 flats of 42, Pelham-rd. B.E. & S., 6, Woodville-ter. Dep. £2. Tenders by January 24.

JANUARY 19.

***Durham City C.**—16 houses, Oswald-court, Church-st. City E. Dep. £2 2s.

***†East Suffolk C.C.**—Two flats for midwives, Mendlesham. E. J. Symcox (F.), County Architect, Ipswich. Dep. £2 2s. Tenders by February 6.

JANUARY 20.

***Barnes B.C.**—Bungalow at Vine-rd. recreation ground, S.W.13. B.E. & S.

***†Hampshire C.C.**—Gram. sch. at Totton, near Southampton. County A., The Castle, Winchester. Dep. £3 3s.

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***†Northants C.C.**—House and alterations to existing farm buildings, Rushden. County Architect, Northampton.

JANUARY 21.

Cowbridge R.D.C.—40 houses at St. Athon site. W. Hawkins, S., 41, Eastgate-st.

JANUARY 22.

Ipswich B.C.—Two-span dutch barn at the cattle market. B.E. & S., 19, Tower-st. Dep. £1 1s.

Liverpool City C.—168 flats at Slade-st. City A. and Director of Hsg., Blackburn-chbrs., Dale-st., Kingsway, Liverpool, 2. Dep. £2 2s.

JANUARY 23.

***Corby U.D.C.**—New central depot. E. & S., 60, Forest Gate-rd. Dep. £3 3s.

***Durham County Police Authority.**—Two police houses and office at Birch-pl., Esh Winning. G. Clayton (F.), Court-la., Durham.

***Maidenhead B.C.**—14 houses, Larchfield housing estate. B.E. & S., 14, Cranfurd-rise. Dep. £2.

JANUARY 24.

Bridgwater R.D.C.—Four houses at Otterhampton. Nicholls & Barton, architects, 41, St. Mary-st. Dep. £2 2s.

***Sunderland B.C.**—Five shops and flats at Farringdon estate. Boro' A., Grange House, Stockton-rd. Dep. £2 2s.

JANUARY 26.

Ebbw Vale U.D.C.—Three shops and two flats at Cambridge-gdns. Council A. Dep. £3 3s.

***Edmonton B.C.**—Detached house at Raynham-rd. school. Boro' A. Dep. £2 2s.

Evesham B.C.—79 houses on Fairfield No. 6 site. Pemberton & Bateman (F./A.), 21, Vine-st. Dep. £2 2s.

Lleyn R.D.C.—10 houses at Chwilog. J. E. Griffiths, architect, 1, Bank-pl., Portmadoc.

***Wembley B.C.**—Convenience at Alperton sports ground. B.E. & S.

***†Watford B.C.**—Conveniences, North Watford library, St. Albans-rd. B.E. & S. Dep. £2 2s.

JANUARY 27.

***Chelmsford B.C.**—28 houses at Melbourne Farm estate. B.E. & S. Dep. £2 2s.

Docking R.D.C.—Eight houses at Sutton estate, Burnham Market. G. Gibson, Hsg. Officer, Council Offices. Dep. £2 2s.

Vaynor and Penderyn R.D.C.—Erection of 100 houses at Trefechan, nr. Merthyr Tydfil. C., Council Offices, 25, Victoria-st., Merthyr Tydfil. Dep. £3 3s.

Vaynor and Penderyn R.D.C.—Erection of 58 houses on three sites. Surveyor and Architect, Council Offices, 25, Victoria-st., Merthyr Tydfil. Dep. £3 3s.

JANUARY 28.

***Ploughley R.D.C.**—Two houses at Evans-la./Mills-st. site, and 16 houses at Evans-la./Bicester-rd. site, Kidlington. F. Openshaw (A.), Oxford Allied Architects, 65, St. Giles-st., Oxford. Dep. £2 per scheme.

JANUARY 30.

***†Bristol C.C.**—(1) Two canteen scullieries at Connaught-rd. schools, Knowle; (2) conversion of Salem Methodist church into gymnasium and dining hall. City A., Council House, College Green. Dep. £1 1s. per contract. Tenders by February 14.

Totnes R.D.C.—19 houses at Stoke Gabriel. E. & S. Dep. £2 2s.

JANUARY 31.

***Coventry City C.**—Omnibus garage at Sandy-la. Husband & Co., 70, Victoria-st., London, S.W.1. Dep. £5.

Reading C.B.—Erection of the Mid-West secondary boys' school. Boro' A., Town Hall, Reading. Dep. £2 2s.

FEBRUARY 2.

***Brighton B.C.**—Eight flats at Park Crescent-ter. B.E. & S., 26-30, King's-rd. Dep. £2 2s.

***East Riding of Yorks C.C.**—Alterations to Agricultural Hostel, Patrington, for additional accommodation. County A., County Hall, Beverley. Dep. £2.

***East Riding of Yorks C.C.**—Two additional classrooms at Beverley St. Mary's boys' school, Longcroft Hall. County A., County Hall, Beverley. Dep. £2.

***Nuneaton B.C.**—101 houses at Camp Hill estate. B.S. Dep. £2 2s.

West Riding of Yorks C.C.—(a) Fire station at Holmfirth-rd., Meltham; (b) Extensions to fire station at Huddersfield-rd., Holmfirth. County A., "Bishopgarth," Westfield-rd., Wakefield. Dep. £2 2s.

FEBRUARY 3.

***Bexley B.C.**—350 dwellings at Lodge Hill estate, Welling. B.E. & S., West Lodge, Broadway, Bexleyheath. Dep. £5 5s.

***Brighton B.C.**—13 dwellings on Hollingdean estate, section 2B/A; 44 dwellings on section 1, and 32 dwellings on section 2 of Woodingdean estate. B.E. & S., 26-30, King's-rd. Dep. £2 2s. each section.

***Wood Green B.C.**—Four garages at Marlow House and nine garages at Vincent-sq.

FEBRUARY 4.

***Dronfield U.D.C.**—12 houses and 4 flats, Holmley-la. Husband & Co., 398, Glossop-rd., Sheffield, 10. Dep. £2 2s.

FEBRUARY 5.

Rothwell U.D.C.—20 houses at Haigh-rd. site. R. Easdale & Son, architects, County-chbrs., Bradley-st., Castleford. Dep. £2 2s.

***Woking U.D.C.**—101 houses, Maybury estate. H. P. Tame, E. & S. Dep. £2 2s.

FEBRUARY 6.

***Huntingdon C.C.**—Two classrooms and ancillary accommodation, Houghton C.P. School. County Architect, Huntingdon.

***Rickmansworth U.D.C.**—Six bungalows, Springwell-av. Dep. £3 3s.

FEBRUARY 9.

***Beckenham B.C.**—House, Wellwood, Layhams-rd., West Wickham. B.E. & S. Dep. £2.

FEBRUARY 11.

Ploughley R.D.C.—10 houses at Taunton. E. & S., Waverley House, Bicester. Dep. £2.

FEBRUARY 13.

Bexley B.C.—350 dwellings at Lodge Hill estate. B.E. & S., West Lodge, Broadway. Dep. £5 5s.

FEBRUARY 16.

***Middleton B.C.**—140 houses and 24 flats, Hollin estate. J. Pollard, Boro' A. Dep. £2 2s.

FEBRUARY 20.

***Shipston-on-Stour R.D.C.**—36 dwellings and site works. E. Earp and Badger (L/A.), Scholars-la., Stratford-on-Avon. Dep. £2 2s.

NO DATE.

***Halifax B.C.**—56 flats at Mixenden and Illingworth. B.E., Crossley-st. Dep. £2.

Romsey and Stockbridge R.D.C.—Four houses and site works at Hill View-rd., Braishfield, site 36. W. Tanner, clerk, Council Offices, Duttons-rd. Dep. £3 3s.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

JANUARY 19.

Gloucestershire C.C.—County S., Quay-st., Gloucester. (Materials.)

JANUARY 20.

Flintshire C.C.—County S., County-bldgs., Mold. (Materials.)

Stourbridge B.C.—B.E. & S. (Materials.)

JANUARY 21.

Kingston-upon-Hull T.C.—City E. (Materials.)

JANUARY 24.

Bootle B.C.—B.S. (Materials.)

Bridlington B.C.—B.E. & S. (Materials.)

Caterham and Warlingham U.D.C.—S. (Materials.)

Grantham B.C.—B.E. & S. (Materials.)

JANUARY 26.

Bebington B.C.—B.E. & S. (Materials.)

Bradford T.C.—City E. & S. (Materials.)

Croydon B.C.—B.E. (Materials.)

Dorset C.C.—County S. (Materials.)

Hertford B.C.—B.E. & S. (Materials.)

Herts C.C.—County S. (Materials.)

Kent C.C.—C.S. (Materials.)

Runcorn U.D.C.—Clerk to the Council. (Materials.)

West Suffolk C.C.—Clerk of the C.C. (Materials.)

JANUARY 27.

Caithness C.C.—Trades for 72 houses on various sites. County A., Wick.

JANUARY 28.

Hackney B.C.—B.E. & S. (Materials.)

Leighton Buzzard U.D.C.—E. & S. (Materials.)

Manchester City C.—Director of Hsg. (Materials.)

Morecambe B.C.—B.S. (Materials.)

JANUARY 31.

Berkhamsted U.D.C.—E. & S. (Materials.)

Cornwall C.C.—County S., Truro. (Materials.)

Halifax C.B.—B.E. (Materials.)

Hunts C.C.—County S. (Materials.)

Lincoln C.C.—County S. (Materials.)

Orpington U.D.C.—E. & S. (Materials.)

Prestwich B.C.—B.E. (Materials.)

FEBRUARY 2.

Cuckfield U.D.C.—Council S. (Materials.)

Deal B.C.—B.E. & S. (Materials.)

East Ham B.C.—T.C. (Materials.)

Folkestone B.C.—B.E. (Materials.)

Newcastle-under-Lyme B.C.—B.S. (Materials.)

FEBRUARY 6.

Breconshire C.C.—County S. (Materials.)

Carmarthenshire C.C.—Clerk to the County Council. (Materials.)

FEBRUARY 7.

Enfield U.D.C.—E. & S. (Materials.)

Swansea B.C.—B.E. & S. (Materials.)

FEBRUARY 9.

Shoreditch B.C.—E. & S. (Materials.)

FEBRUARY 23.

Frimley and Camberley U.D.C.—E. & S. (Materials.)

ROADS, SEWERAGE AND WATER WORKS

JANUARY 24.

Reigate B.C.—Site preparation work on the Rushetts Farm estate, Section 2, Part 2. B.E. & S., Town Hall, Reigate.

Walton and Weybridge U.D.C.—Making-up of Normanhurst-rd. E. & S.

"THE BUILDER" PRICES

CEMENT DOWN

The Cement Marketing Company announce that on January 1, the price of their "Lightning" brand high alumina cement (inclusive of packages), in Great Britain and Northern Ireland, was reduced by 9s. 6d. per ton.

BRASS AND COPPER TUBES

Consequent upon the fall in the price of zinc, the Brass and Copper Tube Association has announced the following revised basis prices of their products :—

		Basis Price per lb.
Brass tubes	reduced by ½d. per lb.	= 26½d.
Brazed brass tubes	" ½d. "	= 37½d.
Drawn brass strip sections	" ½d. "	= 36½d.

The list prices of brass and aluminium brass ferrules are reduced by ½d. per lb.

The basis price for brass tubes applies to both round and shaped solid drawn tubes.

LEAD PRODUCTS

Associated Lead Manufacturers, Ltd., have announced the following revised basis prices per ton which came into effect on January 3 :

	£	s.	d.
Genuine English dry white lead ...	149	15	0
Genuine ground English white lead...	169	15	0
Genuine English white lead paint (per gal)	3	0	0
Genuine refined English red lead ...	134	5	0
Genuine powdered English litharge ...	134	5	0
Genuine English flake and ground flake litharge	136	15	0
Genuine refined English orange lead...	146	5	0
Genuine refined English red lead in oil	159	15	0
Genuine English red lead Pt. BS1011 Type 1 (1 gal tins)	2	17	6
English red lead Pt. BS.1011 Type 2 (1 gal. tins)	2	5	0

Woking U.D.C.—Mains and sewers at Elveden Cottages. E. & S. Dep. £2 2s.

JANUARY 27.

Bushey U.D.C.—Roads and sewers on Ashfield-ave. site. E. & S. Dep. £2 2s.

JANUARY 28.

Caine and Chippenham R.D.C.—Advance preparation of housing site at Colerne for 42 houses, E., Bewley House, Marshfield-rd., Chippenham. Dep. £2 2s.

Lleyn R.D.C.—Sewerage and sewage disposal works at Garndolbenmaen, Caernarvonshire. C., Metro-bldgs., Pwllheli. Dep. £3 3s.

JANUARY 31.

Dolgelley R.D.C.—4,000 yds. of pipes to Penmaenpool. W. Evans & Ptnrs., 30, Stanwell-rd., Penarth. Dep. £5.

FEBRUARY 2.

Southport B.C.—Street works at Heathfield-rd. site 15. B.E. Dep. £2 2s.

FEBRUARY 5.

Hebburn U.D.C.—Roads and sewers at Monkton-la. housing site. E. & S. Dep. £2 2s.

FEBRUARY 6.

Hertford R.D.C.—Preparation of housing site and surface water drainage at Walkern. C., Council Offices, Wallfield, Pegs-la., Hertford. Dep. £3.

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FEBRUARY 16.

Merthyr Tydfil C.B.—Improvements to sewerage scheme—contract No. 2. Sir Herbert Humphries and MacDonald, Cleary's Field, Dixon-st., Merthyr Tydfil. Dep. £5 5s.

MARCH 3.

Wigton R.D.C.—Reconstruction of town sewers. Waterhouse and Rounthwaite, engineers, 165, Westmoreland-rd., Newcastle-on-Tyne, 4. Dep. £5 5s.

GENERAL BUILDING WORK

(LONDON)

Brentwood.—HOUSES.—Erection of 99 houses at the Ingrave estate is proposed by the Token Construction Co., 48, Albemarle-st., W.1.

Dagenham.—FLATS.—T.P. approval has been given to proposals by the Ascot Precision Tool Co. for the erection of factory and offices on the Hainault Industrial Estate.

Dagenham.—FLATS.—B.C. consented to use of land in Albany-rd., Chadwell Heath, for the erection of eight flats by K. I. Joseph, surveyor, 288, High-rd., Ilford.

Ealing.—DWELLINGS.—Plans for 130 dwellings on the Lime Tree estate are being prepared by B.E.

Finsbury.—FLATS.—Proposals are being made for the erection of 48 flats in Spencer-st. by Searle & Searle, architects, Amen House, Warwick-sq., E.C.4.

Friern Barnet.—HOUSES.—Erection of 22 houses at Netherlands-rd., New Barnet, are proposed by Day (Contractors), Ltd., 705, High-rd., N.12.

Highgate.—SCHOOL EXTENSIONS.—Additions to Channing School are proposed by Gollins, Melvin & Ptnrs., architects, 15, Manchester-sq., W.1.

London.—AMERICAN HOTEL.—L.C.C. town planning committee have approved sketch plans for a hotel to be built in New Bond-st. by an American firm, Knott Hotels Corporation. The hotel, which will be 6½ storeys high, will have an arcade of shops on the ground floor. The architect is Mr. Michael Rosenauer, F.R.I.B.A., 86, Brook-st., W.1.

Uxbridge.—CIVIC CENTRE.—U.D.C. propose the erection in High-st. of a new civic centre and municipal offices, comprising council chamber, committee rooms, assembly hall and gardens at est. cost £365,000. Preliminary designs have been prepared in collaboration with the Boro' A. by C. Cowles-Voysey (F.), 2, Bunkers Hill, Wild Wood-rd., N.W.11.

Walton and Weybridge.—FLATS.—T.C. has received permission from Surrey Plan. Com. to build 30 flats in Rydens-rd. and Ambleside-ave., Walton.

Wood Green.—FLATS AND MAISONETTES.—Housing Com. have approved a plan submitted by the Borough Engineer for the development of the railway land in Bounds Green-rd. by the erection of 16 flats for old persons, six flats and 16 maisonettes.

Woolwich.—MAISONETTES.—T.C. are recommended to approve revised layout submitted by B.E. for erection of 62 dwellings in four-storey maisonettes, present phase to consist of 44 dwellings, on the Rectory-pl. site of St. Mary's area. In addition, five terrace houses are to be erected at the rear of Whitbread House. Hsg. Com. has requested an estimate for work by direct labour.

(PROVINCIAL)

Aberystwyth.—T.C. propose crematorium at Cwmcyrfelin.

Bakewell.—R.D.C. to invite additional tenders for seven houses, Harlington Middle Quarter.

Bangor.—T.C. to prepare quantities for houses at Maesgurchen extension.

Barnoldswick.—U.D.C. propose erection of 250 houses.

Bexhill.—T.C. are recommended to approve plans prepared by B.S. for 176 houses at Southlands-rd. estate, and 38 houses and 14 old people's bungalows at Deans-dr.

Billingham-on-Tees.—U.D.C. approved plans for five-bay extension to sodium cyanide buildings and erection of amenity buildings at Cassel Works, for I.C.I., Ltd. Plans have been submitted by Smith, Gore & Co., Darlington, for six houses north of Winford-ter.—U.D.C. has applied for loan sanction for £184,700 for erection of 88 houses by Stephen Coates, Ltd., builders, Middlesbrough, and 50 houses by Charles J. Boyd, Ltd., builders, Middlesbrough, on sites 4 and 5 in Roseberry-rd.

Bridgnorth.—T.C. recommended to approve layout for houses at Grove site.

Bromsgrove.—R.D.C. propose 12 houses each at Latimer-close, Alvechurch, Nuthurst-rd., Cofton and Wythall; four at Penmanor, Finstall; and 10 aged persons' dwellings at Clent.—R.D.C. have approved 10 houses for Drewitt Housing Assoc. at Tanyard-la., Alvechurch.

Bury.—T.C. propose conversion of "South View," Wilson-st., as aged persons' hostel. £10,700 est. cost.

Chadderton.—U.D.C. received approval for layout of bungalows in St. George's-sq.

Chester.—T.C. approved layout of 211 houses at Blacon.

Chesterfield.—T.C. propose 16 houses at Wythburn-rd., Newbold.

Chester-le-Street.—R.D.C. A., F. Bowman, has submitted to M.H. & L.G. revised proposals for 44 houses and 16 flats at Kibblesworth, and eight houses, five flats and one shop at Bournmoor.—Plans have been approved for police houses at Elizabethville, for Durham C.C.

Clayton-le-Moors.—U.D.C. propose new assembly hall at Woodlands. Architect, Prentice Mawson, Lancaster.

Cleator Moor (Cumberland).—Plans being prepared by Remploy, Ltd., London, for factory at Cleator Moor to replace present Remploy town factory. It is hoped to begin work on scheme during coming financial year.

Corby.—John White (Rushden), Ltd., propose erection of boot and shoe factory. Work to commence shortly.

Darwen.—Congregational Church propose dual-purpose church and Sunday-school building.

Doncaster.—Approval sought for erection of 204 houses on Cantley and Intake estates. Est. cost, £252,700.

Dudley.—T.C. to make contract arrangements for erection of Holly Hall clinic at junction of Stourbridge-rd. and Pensnett-rd.

Ellesmere Port.—M.O.E. approved two-form entry jnr. sch., for Cheshire E.C., in 1953/4 programme.

Heywood.—A. Openshaw & Sons, 1, Duke-st., propose 20 houses, Melton-cl.

Higham Ferrers.—T.C. approved in principle 39 houses at Wykeham-rd. site.

Lancs.—E.C. to acquire 18 acres as site for proposed girls' cty. sec. sch. at Golborne.—E.C. propose adaptation of premises, Victoria-rd., Waterloo, for use as day special sch. for sub-normal children, £10,000 est. cost.

Lancaster.—T.C. propose erection of 650 houses on Aldcliffe estate.

Leamington Spa.—B.C. to invite tenders for 58 houses, Lillington estate.

Leeds.—T.C. recommended to approve plans for proposed northern sub-fire station at Stonegate-rd., Moortown, £43,000 est. cost.

Liverpool.—Corn Trade Assoc. propose new Corn Exchange, £1,000,000 est. cost. Work to commence 1953. Architect, H. Hinchcliffe Davies, Liverpool.

Longbenton.—U.D.C. is to let contract for erection of another 20 houses on Croft estate, Forest Hall. Plans by A. E. Sweetman, S., Council Offices, Forest Hall, Newcastle-on-Tyne.

Longendale.—U.D.C. approved 24 houses on site near Hill End House, Broadbottom-rd., Mottram, for E. Greenwood.

Macclesfield.—Hospital Mgmt. Com. recommend erection of new hospital, £1,000,000 est. cost.

Maghull.—Brit. Leg. propose new H.Q., £12,000 est. cost.

Manchester.—Reg. Group Y.H.A. propose new hostel on Pennine Way.

Middlesbrough.—T.P. Com. recommends approval of plan for converting "Brachenhoe," Ladgate-la., into a hotel for a brewery company.

Middlesbrough.—Kitching & Co., 21, Albert-rd., Middlesbrough, are architects for dairy at Cold Knuckles Farm, South Bank-rd., for J. W. Collier & Son.—E. T. Sweeting & Son, builders, Acklam, are to erect 10 houses in Cambridge-rd.

Milnrow.—U.D.C. propose 24 flats and 24 houses on Bentgate-st. estate.

Newcastle-on-Tyne.—City C. to erect four firemen's houses in Shipley-st. City A., G. Kenyon, 18, Cloth-market.

Newcastle-on-Tyne.—Michell Bearings, Ltd., are to erect four storage buildings in Scotswood-rd., to their own plans.—Stephenson & Gillis, Saville-chbrs., are architects for cloth-buying room in Industry-rd., for Jackson & Assoc. Manf., Ltd.—E. A. Gunning, Eldon-sq., has prepared plans for storage and packing sheds at Byker Bank and Leighton-st., for W. F. & J. R. Shephard, Ltd., scrap merchants.

Ormskirk.—R.C. Auth. propose new sec. mod sch.

Penrith.—U.D.C. to let contract for four terrace houses on Scaws estate. Plans by S., Town Hall.

Richmond (Yorks).—T.C. is to develop for housing purposes 17 acres of land in Cutpurse-la.

Richmond (Yorks).—T.C. approved revised plans for health centre in Quaker-la.

Salop.—C.C. propose new fire stn. at Hartshill.

Scarborough.—Nesfields' Breweries, Ltd., are to erect offices at the "Talbot Hotel," Queen-st.—B.E., H. V. Overfield, is to report on proposed erection of further houses in Wreyfield-dr.—Loan sanction has been received for £160,037 for 123 houses at Eastfield, and £11,115 for five flats and three houses at Cook's-row.

Skipton.—R.D.C. approved draft layouts for 116 houses at Beanlands site at Glusburn, and 102 houses at Higherlands site, Gargrave.

Smethwick.—T.C. propose 14 aged persons' dwellings at Perry Hill No. 2 scheme.

South Shields.—New six-form entry sec. mod. sch. is included in E.C.'s building programme for next year, and Page, Son & Hill, 75, King-st., architects, are to prepare plans.

Southwell.—Coal Brd. Housing Assoc. to erect 108 houses at Ollerton; 100 at Bilsthorpe; 72 at Clipstone; and 202 at Rainworth. Tenders totalling £239,557 received for those at Bilsthorpe and Clipstone.—Ministry loan sanction sought for 30 houses and eight flats at Clipstone, est. cost, £49,820; 20 houses and four flats at Ollerton, est. cost, £30,945; 12 houses at Farnsfield, £16,160; and six houses at Bleasby, £7,796.

Stockport.—T.C. recommended to approve layout for 192 houses at Brinnington-rd.

Stockton-on-Tees.—Boro' A., T. C. Hartley, 28, The-square, has prepared layout plans for 123 houses and 39 houses.—Approval has been given in principle to layout plans for 106 houses and blocks of flats providing for 81 housing units at Wrens Mill.—T.C. to negotiate price with Tarslag, Ltd., Bowesfield-la., for erection of six "Orlit" houses in Danby-rd.—Sanction received by T.C. to borrow £90,057 for erection of 79 houses by direct labour on Roseworth estate.—T.C. authorised by M.O.T. to obtain tenders for construction of transport depot.—Plans approved for layout of Oxbridge Farm estate for G. Hope (Builders), Ltd., 121, Bishopton-rd.

Stokesley (Yorks).—R.D.C. has approved plans by Spence Bros., for erection of 10 houses at Springfield.

Stourbridge.—T.C. propose three-storey flats in Norton estate.

Tynemouth.—T.C. approved plans by S. W. Milburn & Partners, 9, Esplanade, Sunderland, for converting Preston Towers, North Shields, into nurses' home, for Newcastle Hospital Brd.—R. Burke, Lambton-rd., Jesmond, Newcastle-on-Tyne, has prepared outline plan for R.C. church and bresbytery in Billy Mill-la.—It is proposed to build church and vicarage at junction of Wallington-ave. and Bavington-ave., Cullercoats, for St. George's Parochial Council.—B.E., D. M. O'herlihy, 16, Northumberland-sq., North Shields, has prepared sketch plan for children's home, and Home Office is being sought.

Urmston.—U.D.C. approved amended layout for 26 shops with 23 maisonettes over, and 20 flats with 40 maisonettes over at Woodsend estate.

Whitehaven.—M.H. & L.G. sanctioned first instalment of T.C.'s plan for civic hall.

Wigan.—T.C. approved plans for new hotel, Mesnes-rd., nr. Stirling-st.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H.M. Government Departments*.

Abram.—24 houses on the Bickershaw No. 5 housing site: *G. Hodkinson, 343, Wigan-rd., Atherton, £28,392.

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Aspull.—10 houses for U.D.C.: *Direct Labour.

Barnard Castle.—Additions to Barnard Castle (Stainton Camp) Temporary sch., for Durham C.C.: *Shepherd & Son, Ltd., Blue Bridge-la., York, £6,269.

Barnard Castle.—Erection of 43 houses in Green-la., for the North-Eastern Housing Association, Northumberland-rd., Newcastle-on-Tyne: *R. C. Williamson (Durham), Ltd., Station Works, Rowlands Hill, Co. Durham.

Battersea.—Additional eight flats on the Battersea Park-rd. (site No. 1) extension: ‡E. S. Moss, Ltd., £19,463.

Battersea.—Erection of six houses on the site of Nos. 1-15 (odd), Longhedge-st. and Nos. 71-77 (odd), Henley-st.: ‡H. Fairweather & Co., Ltd., St. James's-la., N.W.10, £11,399.

Beverley.—Contract 293, 52 houses at Woodmansey; contract 296, eight houses at Lund, for R.D.C. G. Palfreyman, E. & S., 36, Market-pl.: *T. Wright & Son (Hull), Ltd., 57, Regent-st., Hull.

Burton Latimer.—34 houses, Finedon-rd., for U.D.C.: *Brown & Stokes Bros., Ltd., Higham Ferrers.

Carlisle.—Erection of new workshops for blind, for T.C.: *John Laing & Son, Ltd., Carlisle.

Chertsey.—Construction of eight houses, 10 flats and eight garages, with site works; demolition of Lanswade House; and diversion of surface water culvert, for U.D.C. W. V. Davies, E. & S., Council Offices. Quantities by E. C. Harris & Partners:—

W. H. Gaze & Sons, Ltd., Walton ...	£31,331
E. Clarke & Sons (Addlestone), Surrey ...	26,250
*G. W. Taylor, Chertsey	25,911

Clitheroe.—135 "No Fines" houses, for T.C.: *G. Wimpey & Co., Ltd., London.

Crawley.—Erection of the printing house and research block of Lloyd's Register of Shipping: *J. Jarvis & Sons, Ltd., 12, Buckingham Palace-gdns., S.W.1, £125,000.

Dukinfield.—96 houses, Yew Tree-la. No. 2 site, for T.C.: ‡Kenyon Construction Co., Ltd., Altrincham, £121,000.

Easington.—Erection of 28 houses on the East Lea estate, for R.D.C. R. R. Lumsden, S.: *Veti & Edwards, Sunderland, £37,012 (subject to M.H. & L.G. approval).

Easington.—Erection of 46 houses at Wingate, for R.D.C. R. R. Lumsden, S.: *Direct Labour, £61,363.

Heywood.—16 bungalows at Back King-st., for T.C.: *James Berry, Ltd., Heywood.

¶London (Admiralty).—Particulars of contracts placed by Civil Engineer-in-Chief's Department, Admiralty:—

Bedhampton, Havant: Painting of hangars, Maurice Hill, Ltd., The Estate Office, Bedhampton, Havant, Hants. *Wrabness*: Road construction, May, Gurney & Co., Ltd., Sewerage Works, Trowse, Norwich. *Shotley*: Piling, W. & C. French, Ltd., 50, Epping New-rd., Buckhurst Hill, Essex. *Minworth*: Painting, T. H. Kenyon & Sons, Ltd., Chancellor's Works, Croxley-rd., London, W.9.

¶London (Air Ministry).—New contracts to value of £500 or over for week ended January 3.

Building work: Taylor Woodrow Construction, Ltd., Southall, Middx.; V. G. Selwood and Co., Ltd., Chelmsford, Essex; Wilson Lovatt and Sons, Ltd., Wolverhampton; F. R. Hipperson and Son, Ltd., Dagenham, Essex. *Erection of fuel installation*: G. H. Miller and Co., Ltd., London, E.7. *General maintenance work*: G. H. Miller and Co., Ltd., London, E.7. *Heating services*: Saunders and Taylor, Ltd., Manchester. *Building work*: Walter Lawrence and Son, Ltd., London E.C.2.

London (Metropolitan Police).—Contract placed by Metropolitan Police:—Purchase of land and 12 houses at Mount Pleasant, Cockfosters: *New Ideal Homesteads, Ltd., £26,415.

¶London (M.O.W.).—Contracts placed by M.O.W. during fortnight ended December 27.

London: Bush House, Strand, W.C.2, alterations, adaptations and redecorations, Galbraith Bros., Ltd., 61, Bartholomew-cl., E.C.1; British Museum W.C., internal decorations, C. and T. Painters, Ltd., Mordaunt-rd., Harlesden, N.W.10; Brent-bdge., North Circular-rd., N.W.2, internal decoration, South London Decorations, Ltd., 9, Streatham High-rd., S.W.16. *Essex*: H.P.O., Barking, alterations and additions, Clemens Bros., Ltd., 77, Derby-rd., E.7. *Herefordshire*: Buildings 429 and 430, M/Supply, Rotherwas, re-instatement of premises, John Bland and Co., Ltd., East Moors, Cardiff. *Hertfordshire*: Byron T.E. and P.O. Stores, Watford, dismantling removal and re-erection of Marston shedding, George Moss and Sons, Ltd., Cranleigh Wharf, Lady Margaret-rd., Southall, Middx. *Lanarkshire*: Newhouse P.O., Cable Depot, Newhouse, erection of storage, sheds and gatehouse, J. Logan and Son, 13, Lanark-rd., Carluke, Lanarkshire. *Lancashire*: Post Office, Half Edge-la., Eccles, erection of A.T.E. E. B. Jones and Rawlinson, Ltd., 6, Leaf-sq., Salford, 6. *Montgomeryshire*: N.F. Glandulas Camp, Newtown, Mont., repairs and adaptations, Jones and Leach, Ltd., Newtown, Mont. *Northumberland*: Ministry of National Insurance, Benton Park-rd., Newcastle upon Tyne, internal and external redecoration, Edwin Turner, Ltd., 190, Linthorpe-rd., Middlesbrough, Yorks. *Nottingham*: Nottingham, erection of

T.R.S., W. J. Whittall and Son, Ltd., 132, Lancaster-st., Birmingham, 4. *Perthshire*: Cold Store, Muirton, Perth, recovering roof with asphalt, The Limmer and Trinidad Lake Asphalt Co., Ltd., 45, Hope-st., Glasgow, C.2. *Renfrewshire*: S.H.D. Underwood Mill, Paisley, adaptations to form storage accommodation, Hugh Allan and Son, 22, Lawn-st., Paisley. *Warwickshire*: P.O. Factory, Fordrough-la., Birmingham, additions and alterations to "D" Block and out-buildings, C. Bryant and Son, Ltd., Whitmore-rd., Small Heath, Birmingham, 10. *Yorkshire*: N.A.B. & I.R.O., Kingston Liberal Club, Queen's-rd., Kings Cross, Halifax, alterations and new works, Geo. H. Haigh and Co., 115, Long-la., Dalton, Huddersfield; Prison Commission, Armley, Leeds, erection of 19 houses, Walter G. Birch (Harrogate), Ltd., Montpelier House, Harrogate, Yorks.

Middlesbrough.—Erection of groups of 22 and 24 houses on the Park End site, for T.C.: *J. Crawford, Cambridge-rd., Middlesbrough.

Middlesbrough.—Erection of 52 houses on the Park End housing site, for T.C. J. A. Kenyon, B.E.: *J. McCreton, Ltd., King's-rd., North Ormesby, Middlesbrough, £72,387.

Mid Lothian.—Erection of four blocks of flatted houses, terrace houses, shops, etc., at Windsor Parkter., for Corporation of Musselburgh. W. J. Dryburgh, Council A., Master of Works Offices, Musselburgh: *R. Banks & Son, Ltd., Musselburgh.

Perthshire.—Plans prepared for new extensions and additions to the Royal Hotel, Tyndram, Glencoe. Alexander M. Irvine (A.), architect, Invercannie House, Cairnton, Banchory, Aberdeenshire: *William K. MacLeod, Ltd., Aberdeen.

Prescot.—14 flats, Scotchbarn-la. ext., for U.D.C.: *Martin Cowley, Ltd., Clay Cross, Derby.

Rugby.—87 "No Fines" houses at Wolston and 28 at Brinklow, for R.D.C.: *G. Wimpey & Co., Ltd., London, £117,103 and £38,703.

Seaham.—Erection of 100 houses on Section 16 of the Westlea estate, for U.D.C. A. M. Smith, S.: *Direct Labour.

Shifnal.—Erection of 41 houses, for R.D.C.: *Blackham & Bond, Ltd., Wolverhampton.

Shoreditch.—Erection of 24 maisonettes and 24 flats on the Hobbs-pl. area, for B.C.: ‡H. Richardson & Son, Ltd., £99,012.

Shoreditch.—Erection of 84 dwellings forming stages 1 and 2 of the development of Fleming-st. area: ‡Walter Lawrence & Son, Ltd.

Skipton.—Eight flats, Meadowcroft site, Cononley, for R.D.C.: *E. Harrison & Sons, Nether Ghyll, £7,876.

Southwell.—24 flats and flats at Ollerton: *W. T. Kemp, White Hart-st., Mansfield, £31,171. 12 houses at Farnsfield: *W. D. Tuck & Son, Nottingham-rd., Southwell, £16,796.

Uttoxeter.—58 houses at Mayfield, for R.D.C.: *O'Dair Bros., Ltd., £87,856.

Walthamstow.—Erection of six houses in Vernon-rd.: *P. G. Evans & Son, Ltd., £1,462 per house. (Subject to M.O.H. and L.G. approval.)

Wellingborough.—100 houses on the Croyland estate, for U.D.C.: *Drabble Construction Co., Ltd., Wellingborough, £120,224.

Wirksworth.—24 houses at Derby estate, for U.D.C.: *Wm. Alton & Sons, Ltd., Wirksworth, £33,586.

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